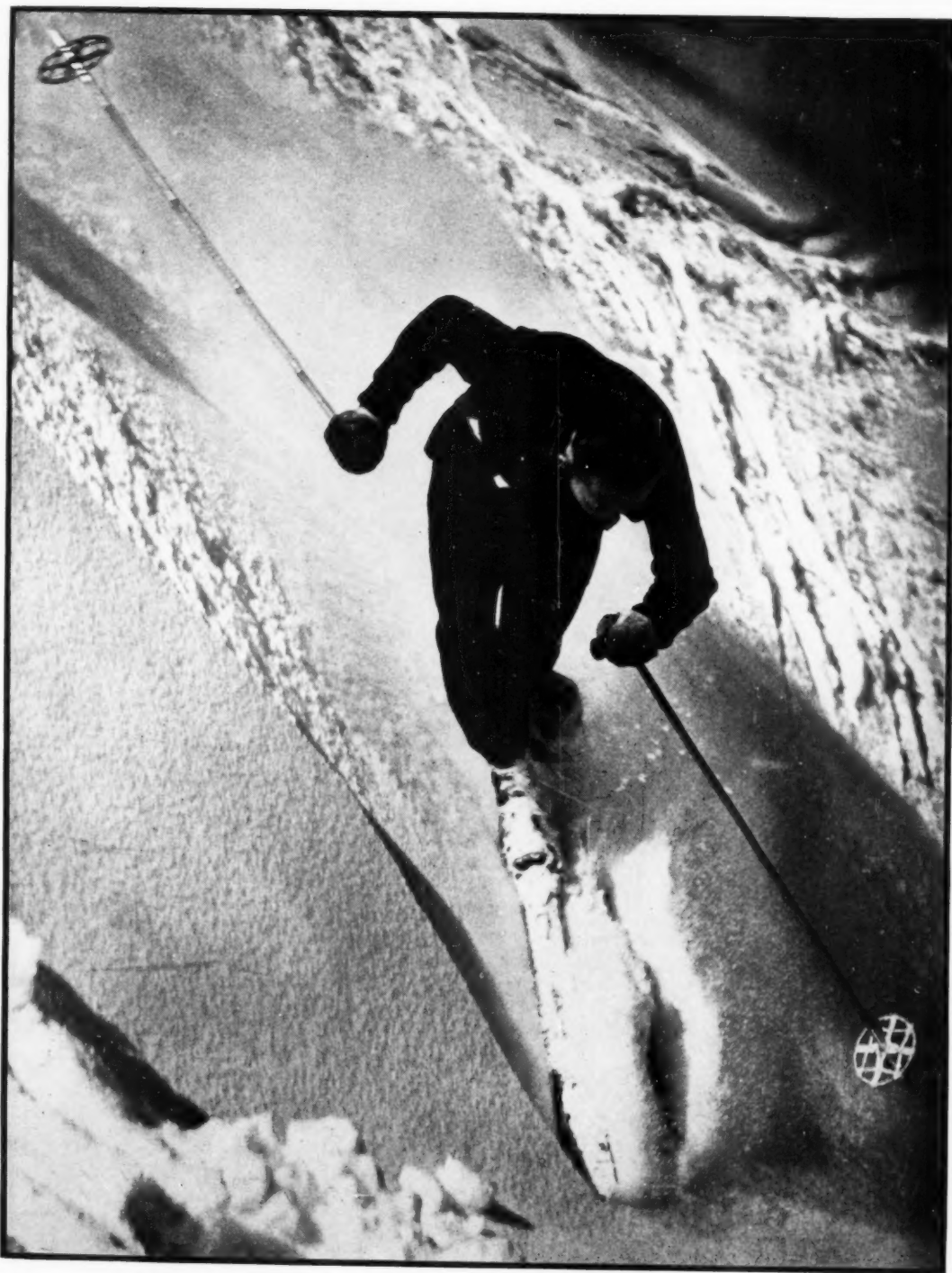


# AMERICAN FORESTS



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## COMING

Are loggers becoming conservationists? If you would know the answer to this read what James Stevens has to say in "Conservation in Calked Boots" in the February issue of AMERICAN FORESTS. Few people know loggers better than Mr. Stevens.

This issue will also bring the first of a series on the famous old logging towns of the country—Bangor, Saginaw, etc. The author is Stewart Holbrook, who has just written a book on the subject. The series will continue through the May issue. Too, Archibald Rutledge will come back to the pages of AMERICAN FORESTS in "A Look at the Hawks."

February will also bring "Bobsledding in the Adirondacks" by Hazel K. Wharton—and stories by Wolfgang von Hagen, George A. Lewis and others.

In March, George Lamb will present one of the most unusual stories of the year in "Why Wood is Beautiful."

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## CONTENTS

VOLUME 44

January, 1938

NUMBER 1

# AMERICAN FORESTS

### Page

- 2 READERS' FORUM
- 5 THE EDITOR'S LOG
- 7 WHAT'S HAPPENED TO THE SHELTERBELT?  
By E. W. Tinker
- 11 REPTILES OF THE BIBLE  
By Alexander Sprunt
- 14 MORE LEADERS OBJECT
- 16 SKIS TAKE THE FORESTS  
By Ovid Butler
- 23 EDITORIAL  
Let Mr. Ickes Answer
- 24 A PAPER COMPANY PROGRAMS ITS TREE FUTURES  
By M. S. Kahler
- 26 WATCH THE BAIT!  
By Carleton Mitchell
- 28 COMMON SENSE IN CONSERVATION  
By W. B. Greeley
- 29 PHOTOGRAPHING TREES IN WINTER  
By Raymond Wohlrebe
- 30 EASTERN RED CEDAR (Tree Series)  
By G. H. Collingwood
- 32 GIVING THANKS FOR TREES  
Poem by Aletha M. Bonner
- 34 THE RANGER'S CORNER
- 36 AROUND THE STATES
- 40 THE FOREST TRAVELOGUE
- 43 BOOK REVIEWS
- 44 FORESTRY IN CONGRESS
- 48 "WHO'S WHO" AMONG THE AUTHORS

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Member A. B. C.

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## RANGER TRAILS

By JOHN RIIS

**B**Y special arrangement with the author, The American Forestry Association is able to offer its members and friends at this time an opportunity to buy a copy of "Ranger Trails" written by Mr. John Riis of *The Richmond News Leader*. Prior to his present connection Mr. Riis spent several years in the Forest Service in Utah, California, Idaho and Oregon, in the early days when Gifford Pinchot was Chief Forester.

This book is a refreshing story of the experiences of the rangers in the days before automobiles carried them over the vast districts under their control. When forest fires were spotted from the tree top or a butte rather than from a steel watch tower or aeroplane. "Ranger Trails" does not deal with the technical side of forestry. It is a simple account of a forest ranger's life in the days when the problem of the Forest Service was chiefly one of organization and of winning the cooperation of the users of range and woods to the new order of things that began when the country awakened to the realization that its resources were for the use of the many and not for the few.

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# READERS' FORUM

### THE SLASH PINE AGE

SIR: Being a slash pine enthusiast, I appreciate and commend the article on this subject in a recent issue of *AMERICAN FORESTS*. As to growth, however, I believe I can beat the measurements given in the article. You state that "slash pine exceeds all of the southern pines in growth, reaching heights of forty-five feet and diameters of six inches in twenty years—"

On a ten-acre plot I planted in Jackson County, Mississippi, in March, 1926, — the first commercially planted pine in the state, so far as I can learn — the trees, in 1935, after but *ten* growing seasons, were thirty-eight feet in height. The average diameter, four and one-half feet above the ground, was nearly six inches.

Here's hoping that you will continue to keep the country interested in slash pine as I consider the future a "small tree" age, and the slash pine is the greatest pine that can be grown, that is, where it can be grown. I believe that commercial users of pine will agree.—*P. N. Howell*, Howison, Mississippi.

### DISCOVERY OF RYDBERGIA

SIR: I really must tell you something interesting. For years I wanted to know the name of a plant that grew on the hill back of my summer home, but never saw it mentioned in any of the books on alpine, not even in Corovan's great book. The flower is *Rydbergia grandiflora* and I found it described and illustrated in *AMERICAN FORESTS*. The native plants have two or three blooms, and the plant grows four or five inches in diameter. I have a plant of *Rydbergia* in my garden that has twenty-one buds and blooms, and the plant measures twelve inches in diameter. I have read recently that this plant grows on Pikes Peak in Colorado.—*Mrs. Warder I. Higgins*, Butte, Montana.

### THE FINEST TRIP

SIR: I have had it in mind for months to write you and tell you of the thrill and great pleasure I experienced on my first expedition with the Trail Riders of the Wilderness in Montana last summer.

No one enjoyed the trip more, or drank deeper of the beauty and grandeur of the wilderness than I. The awe-inspiring and magnificent "Chinese Wall" and the ride

over Gordon Pass down to beautiful Holland Lake were the highlights of the trip. I have seen many a magnificent panorama, but I don't think I ever saw a more inspiring or magnificent panorama than the one that unfolds before one's eyes on the descent from the Pass.

Altogether, it was the finest trip ever, highly to be recommended to any lover of the woods and mountains.—*Max Puyallup*, Puyallup, Washington.

### BLUEBIRDS OR WRENS

SIR: I am always glad to get anything that will help me out with the birds. We have an ideal spot for them. In back of our place we have woods with considerable underbrush so they have good nesting places, and we always provide food and water. In the past year we have seen forty-two different kinds of birds around.

We had a new experience this Spring. The bluebirds were nesting in one of our boxes when the wrens came. We had five wren boxes up but they decided that they wanted the box in which the bluebirds nested. And before we realized what they were doing they had driven the bluebirds away and dumped their five eggs on the ground.

The bluebirds then started to build in another box, but the wrens drove them out. We moved the box, but it made no difference. We were very sorry, for our bluebirds had nested with us two years.—*Lillian Stratton*, Middletown, New York.

### MORE OF CONSERVATION

SIR: I have been reading "Conservation," the digest published by The American Forestry Association, for two years now. I like it. It has kept me informed. It is splendid for reference, and I find myself referring to it with growing regularity. It is worth many times the dollar a year you charge for it.

But I have a suggestion to pass on to its editor. Give us more short material—a half page here, a quarter page there—of the lighter things in the conservation world, and that means all outdoors. Then give us a brief report—say a progress report of the major happenings in conservation, something that we can take in at a glance. Add a few more pages to the splendid digest to accommodate these things and it will be perfect—at least for me.—*F. H. Harper*, Richmond, Virginia.



# DUCKS . . . DIKES . . . AND DIESELS

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This picture—snapped at the Tululake Migratory Water Fowl Refuge, Tululake, California—shows two "Caterpillar" D7 Tractors as they bulldoze extra earth into place to heighten one of the levees. Both belong to the U. S. Department of Agriculture, Bureau of Biological Survey (one of many Federal departments that depends on "Caterpillar" Diesels). The La Plant-Choate and Le Tourneau bulldozers are Government property too.

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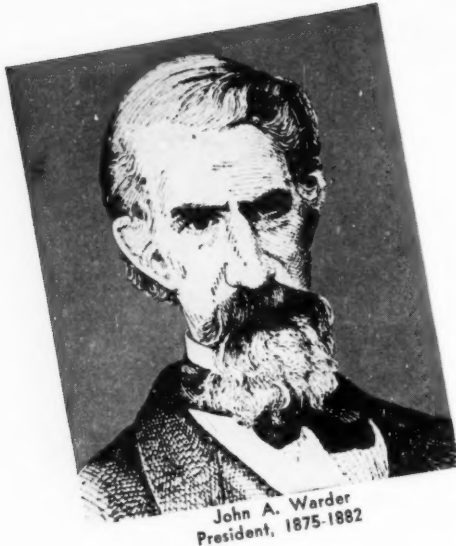
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## OUR PRESIDENTS



John A. Warder  
President, 1875-1882

■ There was no awareness in the early days of the need for protection of the seemingly inexhaustible forests. They were looked upon as an endless resource long after the time of the Colonists, who found them stretching away to the West, dark and unexplored and full of terror,—harboring wild beasts and wilder redskins. From them were hewn timbers for homes, and they were leveled that food crops might be grown.

Swiftly the colonies grew as settlement expanded, the forests giving richly to this expansion but until early in the nineteenth century there was no solidified public opinion against their destruction. The cry was, very naturally, "Cut and clear"—as the nation builded. Thinking people were disturbed, but until settlement pushed

vigorously into the prairie country and found it treeless, the national consciousness seemed dormant. Then crystallized a large body of public opinion and Congress was memorialized to enact legislation to protect the forests.

In 1875, at Chicago, Illinois, a group of earnest, patriotic men and women met to organize a national forestry society. Thus came into being The American Forestry Association,—its declared purpose the promotion of forestry and timber culture, a cause it has never abandoned. Active in this group, a leader and prominent horticulturist of the day, Dr. John Aston Warder was elected the first president of the Association. He was a physician and author as well as horticulturist and forester. Born at Philadelphia, January 19, 1812, his early life was spent in the country. Bartram and Darlington were among his neighbors and he met in his father's house men like Audubon, Michaux and Nuttall. In 1830 his parents moved to Springfield, Ohio, where he first became interested in agricultural science. Graduated at Jefferson Medical College, Philadelphia, in 1836, he settled in Cincinnati in 1837. He was a public-spirited and energetic citizen and gave much time to the study of educational systems. An active member of most of the scientific societies in his part of the country, especially the Cincinnati Natural History Society, he served as a member of the Ohio State Agricultural Board. He was particularly interested in forestry and in 1853 enriched botanical science by his description of the *Catalpa speciosa* as a separate species. In 1873, as United States Commissioner to the Vienna Exposition, he submitted an official report on forests and forestry that gave tremendous impetus to the forestry movement in this country. On July 14, 1883, his death ended an active and useful career.

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# THE EDITOR'S LOG

Secretary Wallace has spoken at last.

Heading the group of commentators on the Reorganization Bill in this number of AMERICAN FORESTS, he leaves no doubt of his opposition to the principles which the bill seeks to carry into effect in respect to agriculture and conservation.

A deeper meaning may be read into the Secretary's statement. It is accepted knowledge in Washington that long ago the White House muzzled the Department of Agriculture against barking or otherwise showing its teeth at the Reorganization wolf. But when the wolf loomed larger and crept closer in the fog of a special session of Congress, Secretary Wallace, according to newsmen, went to the President and demanded the right to defend his Department. The fact that the Secretary has now spoken out is being interpreted to mean that the President heard his stand-up speech through, smilingly lifted the official muzzle and said in effect, "Go to it, Henry."

Now does this incident mean that the President after all does not see eye to eye with Secretary Ickes and his catch-phrase stratagem to make the Department of the Interior an empire over all conservation by renaming it "Department of Conservation"? Washington wonders.

Certainly there should be no doubt in the President's mind as to how public opinion stands on this question, particularly that section of public opinion best qualified to speak with experience and intelligence on conservation questions. Representative of it are the twenty-one leaders in different fields of conservation and public life who have spoken through the pages of AMERICAN FORESTS during recent months:

Judge George W. Wood, President, Izaak Walton League of America  
 Jay N. Darling, President, The General Wildlife Federation  
 Edward A. O'Neal, President, American Farm Bureau Federation  
 Louis J. Taber, Master, The National Grange  
 Mrs. Emily G. Bogert, Conservation Chairman, General Federation of Women's Clubs  
 Mrs. Kemble White, Conservation Chairman, National Council of State Garden Clubs  
 Henry S. Graves, Dean, Yale School of Forestry  
 Gifford Pinchot, First Chief Forester of the United States  
 James G. K. McClure, President, American Forestry Association  
 Arthur Newton Pack, President, American Nature Association  
 H. H. Chapman, President, Society of American Foresters  
 Dr. Henry Baldwin Ward, Former Permanent Secretary, American Association for the Advancement of Science  
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 John B. Trevor, President, American Coalition  
 H. S. Gilman, President, Los Angeles County Conservation Association  
 William L. Finley, Leader and Lecturer, Wildlife Conservation  
 W. B. Greeley, Conservation Chairman, The Camp Fire Club of America  
 Allen Hollis, President, Society for the Protection of New Hampshire Forests

In addition to these spokesmen are more than 5,000,000 members of two hundred local, state and national organizations that have declared the proposal contrary to the best interests of forestry, wildlife and soil conservation.

Against this mighty voice of conservation, the only public espousal of an Interior-Department of Conservation comes from the office of the Secretary of the Interior. Can it be that 5,000,000 conservationists are wrong and only Mr. Ickes is right?

*Orin Rusten*  
 Editor.



"Man strides across the earth, and deserts spring up in his footsteps"  
— the beginning of a dust storm on an unprotected prairie farm  
near Alliance, Nebraska, that may blow both seed and soil away

This shelterbelt, planted on the Howard farm near Orchard, Nebraska, in the spring of 1935 illustrates the technique of tree belting  
prairie farms to protect both soil and crops from dessicating winds





# WHAT'S HAPPENED TO THE SHELTERBELT?

By E. W. TINKER

Photographs by United States Forest Service

The Plains Shelterbelt Project, at one time the subject of great national interest and, unfortunately, heated debate, has apparently disappeared into the limbo of forgotten things. So many people, among them an astonishing number of foresters,—who could not see eye to eye with those who believed that trees could be made to grow on the prairies, succeeded in raising sufficient public doubt to cause the 74th Congress to mandate the Project's liquidation. So a forestry enterprise of magnificent proportions, unable to weather an unexpected barrage of public criticism, or the political fire that followed, slipped quietly into the background of national conservation. In fact the Shelterbelt, as originally conceived, no longer exists.

But there was one thing no amount of criticism and political aspersions could assign to oblivion. It was the need of the Prairie States for trees. Indeed, this need was so obvious that tree planting as a cooperative public and private undertaking simply could not be erased from the national picture. One had but to look to the challenge of dust storms, of drifting sand, of ruined farms, of a hopeless and desperate people.

Nor had this need for trees on the prairies developed over night, so to speak. It was recognized by the first settlers, and as early as 1873 Congress passed the "Timber Culture Act" which resulted in the planting of millions of trees, many of which are growing today. Fifty-one years later the Clarke-McNary Act was passed, providing among other forestry measures for the distribution of tree-planting stock to farmers, and this cooperative program, which is nation-wide, is in operation today. Thus for more than half a century there has existed a recognized essential need in the Prairie States for a type of forestry which takes its origin and character from the region, its people, and the nature of their pursuits.

In view of this need, it is obvious that tree planting on the prairies could not cease with the demise of the much publicized Shelterbelt project. And it didn't. Out of it has grown a new plan of an unspectacular character that has been and is being carried out with energy and enthusiasm by the United States Forest Service. And unlike the original Shelterbelt project, the new plan, known as the Prairie States Forestry Project, has gained in public esteem and is of such proven success that it is subject, locally at least, to wholehearted support and endorsement.

This new project was outlined and legalized under the Cooperative Farm Forestry Act passed by Congress early in 1937. It provides for a planting program requiring a high degree of cooperation between the Federal Government and the landowner. The landowner's part is to furnish the land to plant, which in this agricultural territory requires considerable sacrifice; he prepares the land for planting, is required to provide fencing material to exclude livestock from the areas planted and, except under emergency conditions, is required to do the necessary cultivation work of two to four years duration. It is the plan of the Forest Service to expand the cooperative requirements as the value of the planting becomes more in evidence and ultimately to confine activities of the government to the furnishing of the trees for planting and the actual planting of trees.

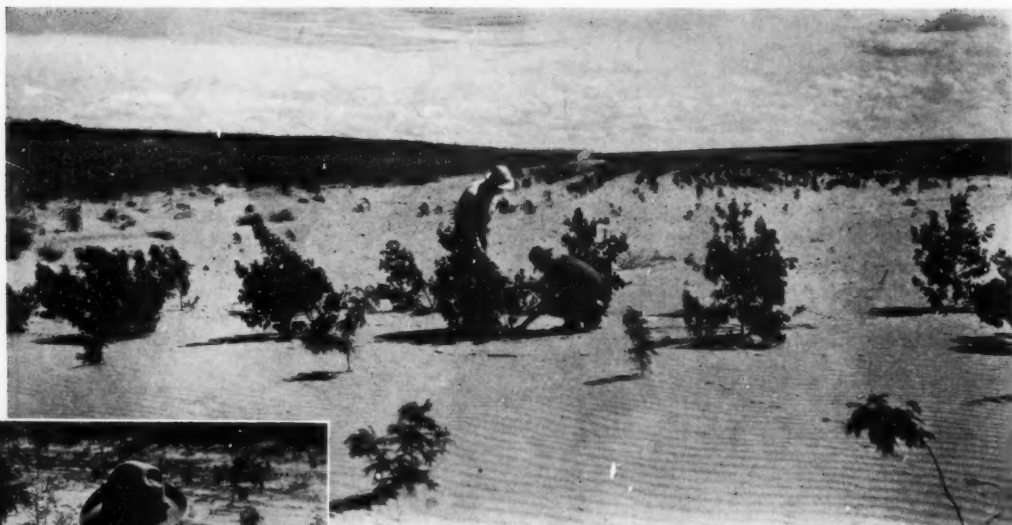
The government is making a contribution in this work not primarily to benefit the individual farmer whose land is planted, but rather to benefit the region as a whole. Wholesale periodic crop failures, drought and wind erosion in this region have at times reached the proportions of a national calamity and have resulted in migration of population and large federal expenditures for relief, seed loans and the like. Farming conditions can, to a very material extent, be improved by extensive prairie tree planting.

The government's part, in addition to supplying the trees and planting them, includes the vital functions of planning and supervision. A certain degree of forestry knowledge and skill is necessary in the successful establishment and management of trees on all but the most favorable growing sites, and farmers naturally are not ordinarily foresters. The proper choice of planting sites, selection of tree species to be planted, proper planting methods, and the right kind and amount of subsequent care of the trees are all a part of the government's contribution, through the Forest Service, in this cooperative public and private tree planting undertaking.

In other words, should a farmer in South Dakota, weary of fighting the destructive effects of wind, desire to devote a portion of his land to a shelterbelt, or tree



Trees will grow on the prairie—and this South Dakota farmer, one of the 6,500 cooperating in shelterbelt planting, exhibits his cottonwoods, planted in 1935



The desert attacks, but the line of trees holds firm. Despite nine inches of sand and soil, this four month old Oklahoma shelterbelt has more than doubled its growth



Wind has scoured the soil away from the roots of this locust, planted in 1936—but it fights on, valiantly



Among the first plantings in 1935, this Oklahoma shelterbelt now casts its welcome shade over children at play

While in South Dakota shelterbelts planted in 1935 are already exerting a marked influence upon adjacent land, many trees having reached a height of fifteen feet or more



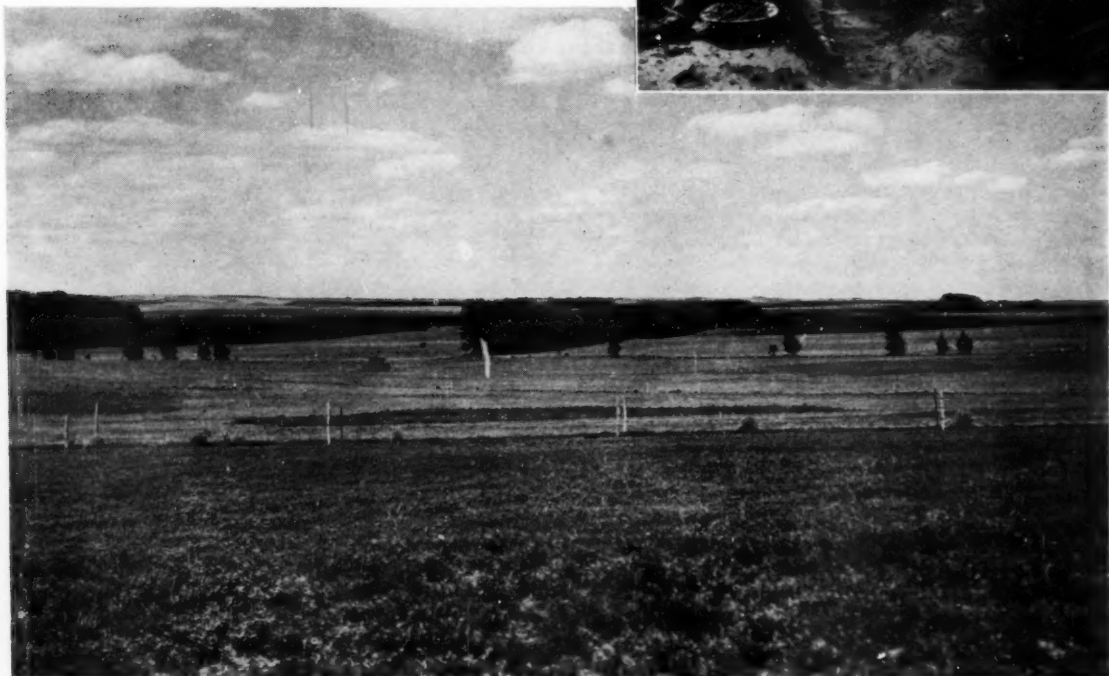


Cultivation is one of the vital factors in the success of prairie shelterbelts—and this farmers are doing, realizing that trees must be treated like any other crop

Foresters have found that seed from trees already growing on the prairie produce the best stock for future plantings. At right is shown seed being picked from one-year-old desert willows



Shelterbelts for every prairie farm is the ultimate goal of the new Prairie States Forestry Project, so the people of that region will carry on as producers and as contented citizens





windbreak as it is locally known, he may enter into a cooperative agreement with the government. Under the provisions of the Cooperative Farm Forestry Act, government foresters will examine his land, determine the most effective shelterbelt system to use, select the trees and shrubs most likely to succeed in that particular soil and climate, plant the trees and instruct the farmer in their cultivation and care. The farmer prepares the land for planting, furnishes fencing material, and does the cultivation work necessary for the survival of the trees. No money is involved. The government contributes science and planting stock; the farmer contributes the land and his own labor.

Regardless of what may have been said in the past about tree planting in the Prairie-Plains region, and regardless of debates between scientists and professional foresters as to the effect of tree planting, the farmers in the territory are, in general, for the project. They have seen trees survive where it was said they could not survive. They have seen the effect of shelterbelts in protecting fields and crops and in improving living conditions. And they are happy to participate, to extend the maximum degree of cooperation of which they are capable. Where, at first, some difficulty was experienced in getting sufficient cooperators, applications for planting projects are being received in greater and greater volume until now, in many instances, it is impossible to meet the demand.

And why shouldn't it be so? Shelterbelt planting, despite predictions to the contrary, has been and is highly successful. The growth of trees planted in 1935 has, in spite of adverse weather conditions, been truly phenomenal. The more rapid-growing trees in many areas by the fall of 1937 have reached a height of from twenty to twenty-four feet and are already having a material effect upon soil movement during high winds. The entire appearance of the countryside is being changed from one of flat monotony to one of real attractiveness. The shelterbelt strips, interestingly enough, are becoming inhabited by birds. The replanting of crops on farms where the seeding is under the protection of the shelterbelts is becoming unnecessary for the seed are not blown out of the ground as they are so commonly where there is no protection.

The total mileage of shelterbelt strips that have been planted within the six states of Texas, Oklahoma, Kansas, Nebraska, South Dakota and North Dakota amounts to 2,600. The total acreage, including farmsteads, amounts to 47,300. In all, 44,800,000 trees, involving 6,500 farms, have been planted. The survival of trees has been beyond expectation. The average survival for 1935 plantings is sixty-six per cent; for 1936, plantings made during the extremely severe drought year, fifty-one per cent; and for 1937 planting survivals are estimated to be not less than seventy per cent.

Certainly this constitutes complete refutation of the theory that trees will not grow on the Great Plains.

Significantly, the heaviest losses occurred where the plantation had been neglected after planting, confirming the theory that successful tree culture on the Great Plains depends upon conscientious cultivation of the young trees until such time as their crowns begin to shade the ground and thus shade out the competition of weeds and grass.

Obviously, not all trees will grow on the prairie; but neither will all trees grow in the verdant valleys of the East. It has been the task of the Forest Service and of foresters, through tireless research and experimentation, to determine just what trees and shrubs are best fitted for the ceaseless battle with the prairie winds and droughts. Since 1916 the Northern Great Plains Field Station, at Mandan, North Dakota, has been the scene

of experimentation in this direction, and more recently there have been other activities scattered throughout the whole Plains region. That remarkable headway has been made, that trees and shrubs have been found that will grow and blossom on the prairie, is evidenced by the high rate of survival during the past several years.

Among the trees found well suited for shelterbelt planting and used extensively in the Great Plains area are the cottonwood, green ash and the Chinese elm—with bur oak, hackberry, honey locust and willows used less extensively. Shrubs chiefly used in the entire area include lilac, wild plum and Russian olive. In the Dakotas and Nebraska, the principal shrub used is the caragana, with some chokecherry. Farther south, from Nebraska to Texas, the black locust has been found an excellent tree for shelterbelts, and is used broadly. So is the apricot, and in some cases, black walnut, catalpa, Russian mulberry, osage-orange and the pecan are used with success. The desert willow has proved to be a satisfactory shrub in Oklahoma and Texas.

In order to produce stock of these selected trees for its planting program, the Prairie States Forestry Project operates nurseries in each of the six states—thirteen in all. The major part of these nurseries are leased from commercial nurserymen, the Forest Service leasing the land and facilities, and supplying its own labor and supervision. The project collects as much as possible of its own seed—and this is very important. For trees, like other organisms, develop characteristics which fit them for the environment in which they occur but which may unfit them for another kind of environment. It is essential, therefore, that planting stock for a given locality be produced from seed taken from trees growing under as nearly identical conditions as possible.

Progress of the program to date is really very impressive, though what has been accomplished is only a drop in the bucket compared with the needs of the region. The area is so great and so relatively treeless that it is capable of absorbing many hundreds of millions of trees and, in fact, is acutely in need of them.

During 1937, according to latest reports, 1,325 miles of shelterbelt were planted in the six states; the number of trees planted exceeded 20,407,000. Farms served numbered 2,165, while acres in plantations approximated 15,300.

During the year South Dakota planted 4,066,000 trees and 144 miles of new shelterbelt; North Dakota planted 3,930,000, mostly replacements, improvements and completing old shelterbelt projects, as only eighty-two miles of new shelterbelts were reported; Nebraska planted 3,472,000 trees, including 339 miles of new shelterbelt; Kansas planted 3,257,000 trees and 202 miles of new shelterbelt; Oklahoma planted 3,052,000 trees, including 333 miles of new shelterbelt; while Texas planted 2,631,000 trees and 226 miles of new shelterbelt.

The cost per acre of establishing shelterbelts has fallen steadily each year, and it seems safe to predict that eventually it will become stabilized at around \$30 an acre, and the farmer will bear a half or more of it. It must be understood, however, that an acre devoted to shelterbelts protects many acres of adjoining land, and that the cost should be pro-rated over the area affected. As an example, all evidence points to the conclusion that about eight and one-half acres of properly distributed windbreaks will protect the average 160-acre farm, so that the cost per acre of land protected is very modest—comparing favorably with the cost of fencing the farm.

The ultimate pattern of the Prairie States Forestry Project, in the minds of the foresters concerned with its success, will be strips of trees lessening the wind velocity

*(Continuing on page 48)*



# REPTILES OF THE BIBLE

By ALEXANDER SPRUNT, JR.



The Temptation of Eve—Engraved by William Blake.  
"And the serpent said unto the woman, Ye shall not surely die."—Gen. III: 4

AMONG all of the lower animals none are more detested, or looked on with more contempt and hostility than the reptiles. This aversion dates back for centuries, so far back, indeed, that its origin is lost in antiquity. There are those who insist that it goes back to the Garden of Eden, and this is putting it in the beginning as much as is possible.

To discuss the approbrium which attaches to the reptile kingdom, however, is not the point of this article. It is obvious that they have occupied the mind and attention of humanity for ages and we find much about them in that ancient and world-read book, the Bible. This is natural in many ways, for, as has been seen in previous articles in *AMERICAN FORESTS* which dealt with bird and animal life as contained in the Book, it follows that as interesting and conspicuous a form of life as the reptilian could not have passed unnoticed during the days when the Bible was in the making.

No sooner does the reader begin the first book of the Bible than reptiles are encountered. Indeed, it is in

Genesis that the supporters of the theory of "instinctive aversion" find their basic argument. One can hardly read Chapter 3 and arrive at the conclusion that snakes were always as we see them today. Certainly, there is a strong inference that, at the time prior to God's curse upon the Serpent, snakes possessed a means of locomotion other than that of crawling on their bellies. In Genesis 3:14 the Lord said to the Serpent—"Because thou hast done this (tempted Eve successfully) thou art cursed above all cattle and above every beast of the field; upon thy belly shalt thou go, and dust shalt thou eat all the days of thy life: and I will put enmity between thee and the woman and between thy seed and her seed . . ."

Here we have two inferences; one that snakes did not originally crawl and therefore must have possessed limbs and walked. Also that, since the Tempter assumed the form of a serpent, the appearance of serpents at that time must have been attractive and not repulsive as they are so regarded today. Certainly, for the be-

guilement of Eve a form of beauty and allurements would have been employed rather than one which would immediately inspire distrust and aversion. So much seems obvious. The other inference is that the almost universal aversion of humanity toward snakes was engendered at once on that far distant day when the curse fell upon the Tempter in his serpentine form.

Be that as it may, and one can accept or reject the theory to one's own fancy, the Bible has considerable to say on serpents throughout the books that follow Genesis. The general references to them number forty-seven; the specific references to individual species amount to seventy-three, giving a total of one hundred and twenty. It must be remembered that the nomenclature of the Bible natural history does not conform to modern scientific classification. The Bible is not a textbook on the subject and a certain loose bunching together of forms which are distinctly separated today need not be confusing. The batrachians, for instance, are not far removed from reptiles and for purposes of convenience they are included among the latter.

There is little doubt but that the most spectacular reptile of the Bible is the crocodile. Though not referred to by its present name, being termed "Leviathan" in the Scriptures, the description of it to which the entire Forty-first Chapter of Job is devoted leaves no room for doubt as to its identity. This account transcends in space and minuteness of detail any other reptile in the whole Book. It is highly poetic and given with a wealth of detail which is indicative of the oriental mind; if space allowed, it would be given here, but only parts of it can be commented

on. In the fifteenth verse the scales are mentioned and their admirable armor-like qualities beautifully brought out. The fire, smoke, etc., as mentioned coming from its mouth and nostrils is, of course, poetic, and commentators agree in thinking that the watery commotion produced by this great saurian when surprised or alarmed induced imaginative people to think that the spray was smoke and where there is smoke there must be fire!

The speed of the crocodile in the water at times seems to be illustrated in the thirty-second verse, which reads: "He maketh a path to shine after him; one would think the deep to be hoary." The boiling foamy wake which is left by the surging tail of a swiftly moving saurian would seem literally "hoary" to an observer. The hide of the crocodile was all but impervious to the puny weapons of that day; spear, arrow and sword seemed

impotent against the huge monsters which, in that time, must have far exceeded in size the same species today. It can be readily imagined, then, that the ancients considered the crocodile as embodying the essence of destructive energy, coupled with an impregnability which was universally dreaded.

Less concrete and similar to the unicorn among the mammals is the dragon to which reference is made thirty-three times, far more than any other! The Hebrew word from which most translations are taken is *thannin* or *thannim*, and really signifies a large fish, or sea-creature. Naturally, a wide range of latitude is obvious. Dragons, as they are usually pictured, having numer-

ous heads, leathery wings, terrible talons and flaming crests do not, and never have existed. Such distorted creatures are products of oriental imagination but, like the unicorn, have laid such hold on popular fancy that there are those even today who regard them as frequenting certain mysterious portions of the earth. The dragons of the Bible were probably some unnamed sea monsters, or perhaps land creatures, which because of their appearance were calculated to inspire fear in a more or less helpless populace. Many of the "dragon" references designate the Evil One, or Satan.

When we come to consider the snakes, we find that one of the most wholesale contacts experienced by Biblical peoples with this phase of life was the visiting by the Lord upon the Children of Israel in the wilderness the plague of "fiery serpents." This is treated of in Numbers 21: 6. The snakes came in multitudes among the people and many died from their bites, a punishment

inflicted upon them because of their determined disobedience of Jehovah. In the original version, the Hebrew word *saraph* is used in describing the serpents and means literally "to burn." The term "fiery" was probably meant to describe the effect of the poison rather than for a picture of the snakes themselves, as the intense burning of the wounds together with a desire for water was pronounced in the victims.

The "flying fiery serpents" referred to in Isaiah 30: 6 are rather difficult to trace exactly. The word serpent is so generally used that it is hard to pin it to any particular species but it is entirely possible that some winged creature perhaps not strictly reptilian in character but possessing a venomous sting is referred to. It may well be, too, that the "fiery" applies to the brilliant metallic color or luster which such a creature may have



The Crocodile is termed Leviathan in the Scriptures and takes a prominent place among the reptiles—"Of Leviathan he saith: He is king over all the children of pride." Engraved for The Book of Job by William Blake

possessed; one can hardly suppose that literal snakes of fire were intended.

Little is said of specific species. The chameleon, lizard and tortoise are mentioned in Leviticus 11: 29, 30 as creatures unfit for human consumption, but beyond that, no light is thrown upon them. The snakes, of course, claim precedent among the reptiles from the human viewpoint, though but few of them are mentioned as individual species.

In every case, however, when specific kinds are mentioned they are of venomous species, the beneficial snakes seeming to have claimed no more attention than they do today! Perhaps the most interesting, from an historical point of view, is the asp, or present day horned viper (*Cerastes cornu-*



The Serpent of Brass—drawn by Fritz von Uhde. "And the Lord said unto Moses, Make thee a fiery serpent and set it upon a pole."—Numbers 21: 8

*tus*). This snake is referred to five times; in Deuteronomy 32: 33, possessions of the enemies of the Children of Israel are described in these words: "their wine is the poison of dragons and the cruel venom of asps." In Romans 3: 13 the apostle Paul, in one of his written

sermons quotes older Scripture to the effect that all people are under the opprobrium of sin whether Jews or Gentiles and that there is no one who has cause to congratulate himself because of superior ability to remain perfect. Those who are addicted to falsehood are characterized as having "their throat . . . an open sepulchre: with their tongues they have used deceit; the poison of asps is under their lips." It is in-

(Continuing on page 47)



Paul and the Viper—drawn by Max Liebermann. "And he shook off the beast, into the fire, and felt no harm." Acts 28: 5

## MORE LEADERS OBJECT---

To the Reorganization Plan to Group Conservation Activities of Federal Government  
in Old Interior Department Under New Name, as Provided in Senate Bill 2970



HENRY A. WALLACE



WILLIAM L. FINLEY



MRS. KEMBLE WHITE

This is the third panel of comment on the Reorganization Bill now pending in Congress. For leaders of conservation who have previously expressed vigorous opposition to the bill in these columns, see page 5.

"No one familiar with the existing Federal Government will question the need for reorganization. Probably everyone will accept the thesis that the grouping of activities by Departments should be in accordance with major purposes or functions, and that the end result should be the grouping of related activities by Departments.

"I hold that agriculture is such a major purpose and function. And I place in agriculture all those activities which relate to the use of land and water for producing crops and growing things; those which deal with the use of the crops themselves; those which insure the maintenance for all time to come of the productivity of the land and water; those which insure management of the land for watershed benefits, and finally those which deal with the welfare of people on the land.

"This group of activities is second to none in natural resource conservation. On them we must rely for all our food and clothing and for substantial parts of the materials for shelter and fuel. For the greatest contributions to human life and civilization now and for all time to come we must for this group of activities have correlation and integration in research and planning and in a wide scope of governmental action. This group of activities calls for a unified national program in the most comprehensive sense of the word.

"I sincerely hope that we may have a reorganization of the Federal Government, and that one essential part of it will consist of such a grouping of agricultural activities as that indicated. I shall exert all of my influence to this end."  
—HENRY A. WALLACE, Secretary of Agriculture.

"Senate Bill 2970 is not a logical plan to save our wildlife resources because it designates the Department of Interior as the future conservation agency of the United States. This Department has followed a policy of using our natural resources for the benefit of individual citizens, and of destroying one resource in harvesting another.

"Some of our greatest federal waterfowl refuges controlled by the Interior Department have been needlessly dried up. Others have been leased to the stockmen. Untold millions of fingerling trout and salmon have died in the fields because of unscreened irrigation ditches.

"In the western states, the Interior Department administers the Public Domain of 143,000,000 acres. Mr. Ickes says the use of the Public Domain will be for the stabilization of the livestock industry. Why not stabilize our wildlife resources?

"Mr. Ickes speaks of the Bonneville and Grand Coulee Dams on the Columbia River as conservation measures. These and other proposed dams for irrigation and power may benefit a certain class of people and some industries, but they also barricade the greatest salmon stream in the world.

"The Department of Interior has not conserved, but has destroyed some of our important wildlife resources in the West. Why should it be made the Department of Conservation?" — WILLIAM L. FINLEY, National Leader and Lecturer, Wildlife Conservation.

"The National Council of State Garden Clubs is absolutely opposed to the transfer of the Forest Service, Biological Survey, and Soil Conservation Service to the Department of the Interior and therefore opposed to the reorganization bill as it relates to conservation. The Department of Agriculture functions as the governmental agency to further the reproductive resources of our country. In this department the Forest Service, the Biological Survey, the Soil Conservation Service, have assumed a logical position and we are opposed to any transfer that would endanger the principles of coordinated conservation." — MRS. KEMBLE WHITE, Conservation Chairman, National Council of State Garden Clubs.



H. S. GILMAN

"The National Forests in Southern California, and for that matter throughout the irrigated West, play an important part in the national agricultural program, for it is from these higher forested areas that the great percentage of irrigation waters originate. The character, quality, and quantity of this water determines the success of our irrigated agriculture.

"During the thirty-two years that the National Forests have been administered and managed by the Forest Service under the Department of Agriculture our agriculture has developed in direct ratio to the development of the water supplies.

"During this period the Forest Service has worked closely with the water users, in setting up an efficient, economical and successful land and watershed management program. This management requires technically trained and experienced men and the Forest Service has developed these men and techniques along with theirs and our program.

"The removal of the Forest Service from the Department of Agriculture to another governmental department as contemplated by Senate Bill 2970 cannot be justified from the standpoints of efficient and economical administration."—H. S. GILMAN, President, Los Angeles County Conservation Association.



D. C. EVEREST

"The paper and pulp industry draws largely upon the farmers for its pulpwood requirements. Federal activities in relation to agriculture are concentrated in the Department of Agriculture. To split departmental activities relating to forestry between two governmental departments needlessly complicates administrative procedure and seriously militates against the continuous efficient operation that has been established.

"The paper and pulp industry has initiated a cooperative forestry movement in the South which will include not only company-owned lands but also the lands of independent owners and particularly of farmers. Through the Forest Service, the agencies of the Department of Agriculture are joining with interested state agencies in this cooperative movement. Divided jurisdiction in the Federal cooperation would constitute a serious handicap.

"It is the opinion of the paper and pulp industry, based upon its long experience with Government agencies, that a division of authorities which would involve different policies, different personnel, and which would undoubtedly result in substantial duplication of effort and corresponding duplication of Government expense, would retard the forward movement of the whole forestry program."—D. C. EVEREST, President, American Paper and Pulp Association.

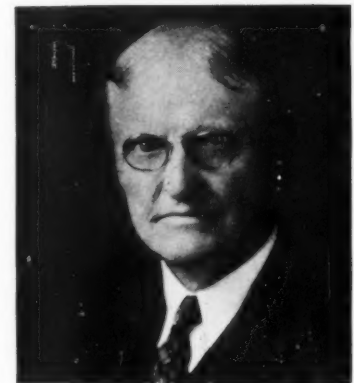


HENRY BALDWIN WARD

"The organization of conservation activities within the framework of the Federal Government demands careful scientific analysis. For most effective service those bureaus specializing in different fields of conservation must be grouped together on the basis of similar scientific principles of action. This Senate Bill 2970 does not do.

"Natural resources fall in two distinct classes: those which properly guarded are maintained by their own reproductive power, and those which can never be replaced in kind. Trees, fish, game are resources which scientifically managed replace the toll taken for man's use. As gold, iron, coal, clay are mined, the resource is to that extent exhausted. This is the fundamental contrast between living and non-living resources.

"To cut across that line, as Senate Bill 2970 clearly proposes, is to divorce things which naturally belong together. Forestry and wildlife cannot be separated from agriculture without necessarily duplicating bureaus for plant and animal diseases, biochemistry, insect enemies, etc. Science in these fields knows no difference between private and public land. Growth, reproduction, protection are identical in public areas and in private areas, and methods of study being similar should be carried out in the same department. These methods differ widely from those demanded in the conservation of non-renewable or non-living resources." — HENRY BALDWIN WARD, Former Permanent Secretary, American Association for the Advancement of Science.



JOHN B. TREVOR

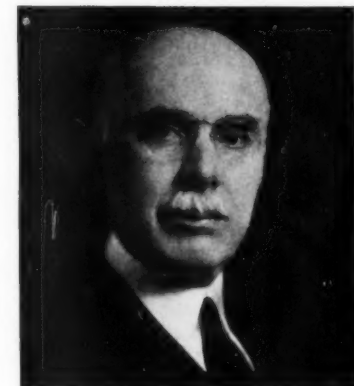
"Senate Bill S. 2970 for the reorganization of governmental agencies embodies a number of provisions which, in my opinion, are highly detrimental to the welfare of this nation.

"The method by which power delegated to the President shall be put into effect seems to me subversive of constitutional legislative procedure. In the event that Congress should pass a bill to prevent the plan of reorganization proposed by the President from taking effect, the President could veto it, and if he controlled one vote over one-third in either House, he could prevent the will of an overwhelming majority of Congress from taking effect.

"The provision of the bill relating to Presidential appointments is, in my opinion, one of the most vicious and dangerous attacks on the principle of an independent Civil Service which could be devised.

"There are other features relating to the distribution of Departmental functions which would, in my opinion, disrupt the activities of agencies on which the people have come to rely for their advice and protection.

"It is to be hoped that every citizen will exert his personal influence on his representatives in Congress to see to it that this bill, as it now stands, be defeated."—JOHN B. TREVOR, President, American Coalition.





Photograph by Union Pacific

## SKIS TAKE THE FORESTS

By OVID BUTLER

LURED to random travel by the automobile during the prosperous Twenties, the American people discovered the National Forests to be great summer playgrounds.

Lured to snow sports by the lowly ski during the depression Thirties, they have found those same forests to be equally great as winter playgrounds.

Prior to the depression, National Forests subject to heavy snowfall were for the most part considered snow-bound during the winter months. After the hunting season in the fall, back country and high country activities went into hibernation along with the bears; ski tracks in the white panoramas of forest land were just about as few and far between as bear tracks. They were made only by forest rangers and mountain people called out on urgent business.

In a few short years the scene has changed with remarkable swiftness, particularly in those snow forests that lie within reasonable distance of towns and cities and whose snow and topography adapt themselves to the adventurous and invigorating art of skiing. Many regions that formerly were still trackless, uninhabited scenes of mountain winter today are alive with darting figures clad in gaily colored garb and riding the wooden ski down mountain slopes at thrilling speeds. Like pioneers bursting out from the fleshpots of civilization into a new and unexplored land of adventure, the skiers have invaded the Forests and, as their increasing numbers show, they have found them much to their liking.

To meet and encourage this use of the Forests for winter sport, the Forest Service has developed special skiing areas or centers on many of the Forests. These areas cater to demands ranging from merely ski trails in solitudes of wilderness whiteness to centers of activity where great crowds gather for gay and exciting tourna-

ments. The highly developed areas provide ski runs for both amateurs and professionals with ski jumps of varying degrees of hazards. In some cases warming shelters and ski tows in the form of tractors or aerial trams to carry the skiers back up the mountain inelines have been provided. In one instance, a huge hotel has been built at an elevation of 6,000 feet where ski enthusiasts can be housed. This is Mount Hood's recently completed Timberline Lodge on Oregon's premier snow peak.

The increasing popularity of the National Forests with the ski lovers may be attributed primarily to the long skiing seasons, the texture of the snows and the spectacular winter scenery of the high mountain country embraced in the National Forests. Ordinarily skiing seasons extend from late November to April and sometimes even into May and June, depending upon snowfall and weather conditions. The photographs on the pages following portray some midwinter scenes typical of those National Forests where winter sports are very much in the ascendancy.

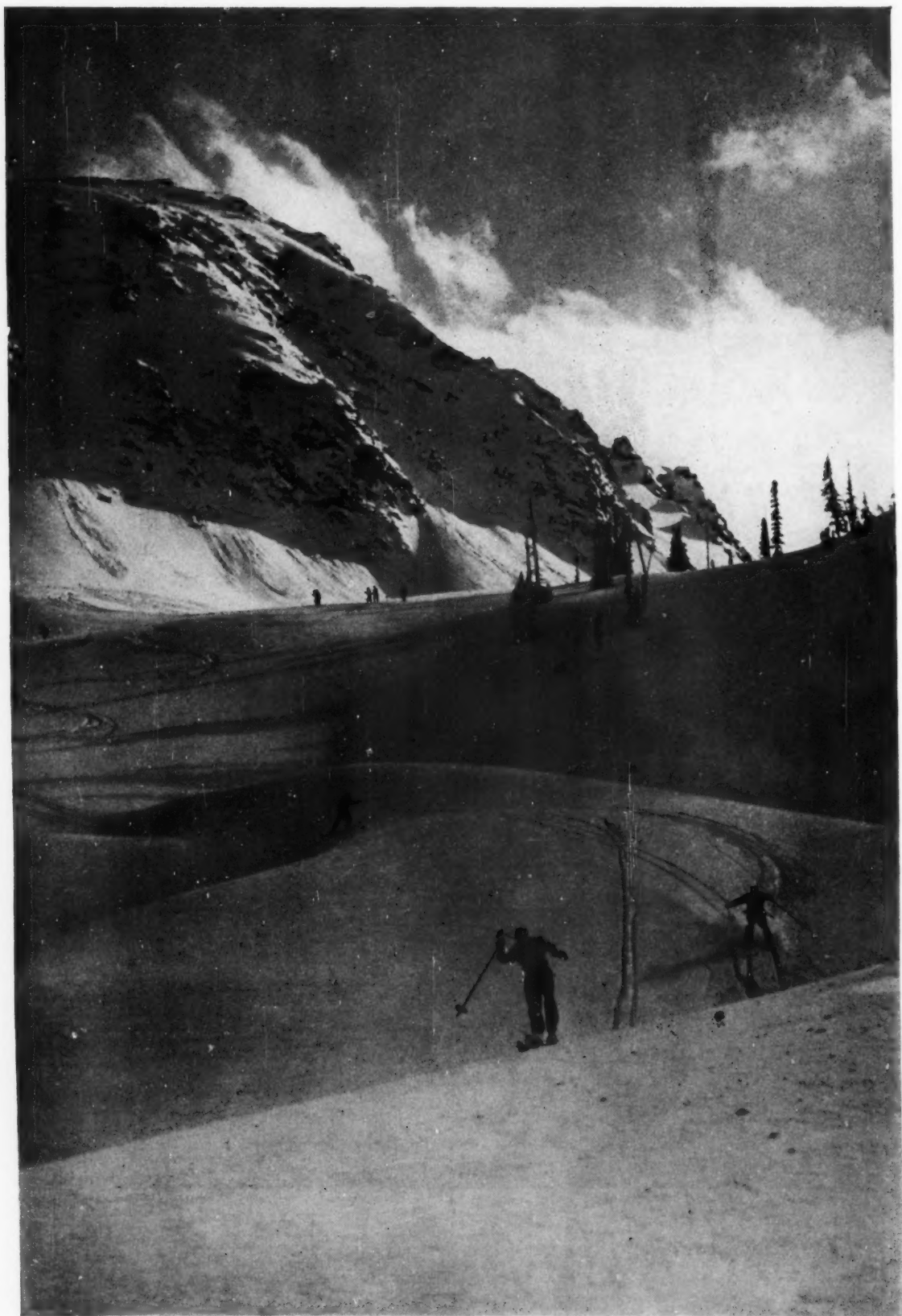
To one looking for ski adventure and a winter's vacation with plenty of snappy exercise, a bird's-eye view of the more popular spots in the National Forest circuit may be helpful. In the northeast, famous Tuckerman Ravine in the White Mountain National Forest has become the winter mecca for thousands of ski fans. The Ravine is a high, glacial cirque on the eastern side of Mount Washington where snow accumulates to a great depth and remains until late in the spring. On one day alone last winter approximately 3,000 people enjoying snow sports were counted in the Ravine.

Coming by train from New York, Boston and other population centers to Gorham, North Conway and Bartlett, and there joining the motor procession, these out-



Photograph by Union Pacific

Sun Valley, in the Sawtooth National Forest of Idaho, is becoming the winter sports capital of the nation. Here the smooth, rolling, treeless slopes so inviting to ski enthusiasts are seen from a window of famous Sun Valley Lodge



Photograph by Andre Roch

Colorado offers a number of outstanding skiing centers but none surpass areas in the Holy Cross National Forest for snow and sunlight conditions or for cross country skiing of every description





California's top winter sports area is in the Tahoe National Forest where more than a hundred thousand people each winter enjoy the thrills of skiing and other snow sports



Photographs by Shell



Photograph by U. S. Forest Service

Special ski trains carry thousands of ski enthusiasts from New York, Boston and other population centers of the Northeast to famous Tuckerman Ravine, in the White Mountain National Forest of New Hampshire



Photograph by Dwight Watson

There are hundreds of miles of ski grounds in the National Forests of the Pacific Northwest—from the year-around snow sports on Mt. Hood to the great open slopes of the Cascades in Washington. Above, a skier discovers the beauty of El Dorado Peak, in the Cascades



Photograph by Shell

Skiing enthusiasts are finding their greatest adventure in the National Forests of the country—and the forests are ready to serve them

of-door folk drive over well planned state roads to the foot of the two and one-half mile trail leading up to the area. With no overnight accommodations in the Ravine, skiers return for the night to the Appalachian Mountain Club Pinkham Notch Camp at the trail entrance, or to the many hotels, inns, and tourists' cabins in nearby towns.

More accessible to the east is Allegheny National Forest, in Pennsylvania, with its Water Mill Race ski area near Kane. This is a new development but it is drawing more and more attention, including "snow-trains" from Pittsburgh. The area offers a ski run of three-quarters of a mile with a powered ski tow to its top, and thirty miles of ski trails, cleared and marked by the Kane Ski Club. Hotel accommodations are available at Kane, located on both the Pennsylvania and Baltimore and Ohio Railroads.

Going West, Denver is the take-off for the most popular winter sports area in Colorado—Berthoud Pass, in the Arapaho National Forest. Located on the Continental Divide, this area offers ski runs both for amateurs and experts in various directions down both the eastern and western slopes of the Rocky Mountains. A ski tow is available here. Berthoud Pass is at an elevation of 11,314 feet and commands views of inspiring beauty. It is located on U. S. Highway No. 40, which is kept open throughout the winter. Last winter 20,000 people participated in winter sports at the Pass.

More distant from Denver is another popular winter ski center on Castle Creek, in the Holy Cross National Forest. Located near Aspen, Colorado, it is reached over State Highway No. 82, or by the Denver and Rio Grande Railroad. The area provides cross country skiing of every description. Dr. Gunther Langes, noted ski authority, after visiting the Aspen region stated that in snow and sunlight conditions it surpasses the Alps.

Swinging northward and westward from Colorado takes one into Idaho and to the most publicized "snow bowl" in the country today—Sun Valley Lodge, winter show place of the Union Pacific Railroad. Located just inside the Sawtooth National Forest, Sun Valley is the gateway to upper Wood River where mountains and valleys meet to form an ideal winter sports capital. And national advertising is making it just that. For twenty-five miles up Wood River, winter sports are becoming parts of the glistening landscape—not only skiing but dog and reindeer sledding.

Into Sun Valley this winter has come a strange new monster, gasoline powered. It will take skiers beyond the highest lifts up among the elevated peaks where the truly great ski runs begin—Boulder Mountain, Bald Mountain and others. This new tractor, as revolutionizing in cross-country snow service as the Sun Valley chair-lifts were in fixed uphill travel last year, can move through any cleared way, no matter how deep or drifted the snow and on slopes up to forty per cent. The tractor, capable of hauling twenty-five passengers, will reach out into the far and high places among the Wood River mountains of the Sawtooth Forest. Invented and designed by Forest Service engineers, and first used on Mount Hood, it has been improved by the Union Pacific and several units put into service this winter.

In Portland, Oregon, during the winter, the ski fan may find close at hand just about the best to be had in winter sports. Sixty miles east of the city, Mount Hood rises to form the outstanding feature of the Mount Hood National Forest. Here winter sports growing during recent years like a snowball rolling down hill, gave local ski enthusiasts and winter sports or-

ganizations of the Portland region the idea of a year-around snow sport center high on the shoulder of this majestic mountain. The Works Progress Administration furnished the funds and the workmen. Today the new Timberline Lodge and winter sports center is a reality, ranking with the best in the country, according to ski experts. Skiing for the eight months from November through June will go ahead at full blast, and on snow fields not more than a quarter-mile from the new Lodge recreationists may enjoy skiing all summer.

The advantage of the new Lodge, which will house more than 200 people and provide dining accommodations for several times that number, is the fact that it makes available to the public the big natural snow fields formerly accessible only to the hardy few. The Lodge will maintain ski instructors, ski shop, repair shop and waxing rooms. The ground floor will be devoted to feeding and warming the ski crowds. Nearby can be found all types of desirable snow fields, with easy grades for the novice and sharper slopes for the expert.

Other ski runs in the Mount Hood district include the Ski Bowl and Mulptop Hill. On the Class A or senior course, star performers make jumps up to 225 feet, while Class B and C jumps furnish ample opportunity for the beginner. From the new Timberline Lodge, the ski trail drops 2,000 feet in about four miles, connecting with the Mount Hood Loop Highway which is constantly open to traffic and close to the Ski Bowl. Mount Hood National Forest held top rank among Oregon and Washington Forests last winter in number of winter sports visitors, with nearly sixty thousand estimated ski visitors for the season and about 8,000 on special occasions.

In point of popularity, Heather Meadows in the Mount Baker National and Deer Park, in the Olympic National Forest, rank next to Mount Hood. Scenically these two winter sports areas would be hard to surpass. Heather Meadows is an alpine setting that in winter becomes a white world dominated by rugged peaks of which Mount Baker, 10,750 feet in elevation, and Mount Shuksan, 9,038 feet, are dramatic sentinels. It is a paradise for skiers because of the unobstructed miles of open slope, varied in pitch to suit the skill and courage of all. Breath-taking slopes and jumps challenge the veteran performers and easier grades prove inviting to beginners and less venturesome to amateurs.

Heather Meadows is fifty-four miles east of Bellingham and 153 miles from Seattle in the Mount Baker National Forest. The highway from Bellingham is kept open during the winter, and accommodations for heavy traffic are provided. A private club building is already on the Forest and a new club house is under construction, supplementing the attractive accommodations furnished by the Mount Baker Lodge, an all year-round hotel development. More than 34,000 persons enjoyed the winter sports facilities on the Mount Baker National Forest last season.

Deer Park ski area in the Olympic Forest, about seventeen miles south of Port Angeles, Washington, is accessible from towns of the Olympic Peninsula, by the excellent U. S. Highway No. 101, and a one-way mountain spur road with turnouts. Seattle skiers save time by driving their cars onto the Port Ludlow ferry, connecting with the highway at the north end of the Olympic Peninsula. The development at Deer Park is still young. Jumps have not been constructed but the ski runs are excellent. (Continuing on page 47)



# EDITORIAL



## LET MR. ICKES ANSWER

When in the course of human events, one Department of the Government proposes to take over a substantial part of the functions and organization of another, and to assume among the sisterhood of departments a dominance and overlordship incompatible with that equal station to which each is entitled by the nation's laws and which is essential to peace and to mutual confidence and respect, a decent respect for the opinions of mankind requires, as Thomas Jefferson would say, that it declare the causes, or at least one good reason, which impel it to the proposed exaltation.

It is admitted that from time to time minor adjustments between departments may be desirable. But such adjustments should be made in a spirit of comity and fairness and should be decided solely with a view to advancing the general welfare rather than to satisfy plans for departmental expansion. For some good cause or sound reason fairly justifying the proposed transfer of the Forest Service as advocated by the Department of the Interior, we have sought widely and diligently, but in vain.

Conceivably, answers to the following questions might clarify the enigma:

Was the Department of the Interior prompted to this course by the belief that the resources of the National Forests were otherwise in jeopardy?

Does the Secretary of the Interior disapprove the administration which the National Forests have received in the Department of Agriculture during the past thirty-two years?

Does he believe that the personnel of his Department is equipped to give the National Forests a more efficient and faithful administration than the trained organization in the Department of Agriculture, which for a third of a century has won the approval and confidence of the entire nation?

Is the transfer proposal justified as a measure of reprisal on the part of the Department of the Interior by reason of the fact that the National Forests were originally in that Department under the name of "Forest Reserves" and were transferred to the Department of Agriculture by an Act of Congress February 1, 1905?

In connection with this question, it is pertinent to recall that the transfer was not advocated by the Department of Agriculture over the opposition of the Department of the Interior. Instead, it originated in the Department of the Interior itself, was concurred in by the Department of Agriculture, recommended by President Theodore Roosevelt in both his first and second messages, and unanimously passed by Congress. In his

report for 1903 Secretary Hitchcock of the Department of the Interior said:

"Forestry, dealing as it does with a source of wealth produced by the soil, is properly an agricultural subject. The presence of properly trained foresters in the Agricultural Department, as well as the nature of the subject itself, makes the ultimate transfer, if found to be practicable, of the administration of the forest reserves to that department essential to the best interests, both of the reserves and of the people who use them."

Has the Department of the Interior been importuned by users of the National Forests or by conservationists and their organizations to rescue the National Forests from the Department of Agriculture as a public duty?

Has the Department of the Interior put its own house so completely in order that there is no further opportunity for it to serve the cause of forest conservation in its present field?

Is it not a fact that great fields for real service still lie neglected within the province of the Department of the Interior?

This last question suggests a number of fields of special interest. Within the Public Domain, for example, and under jurisdiction of the Department of the Interior are some millions of acres of public timbered land valuable for watershed protection and for the production of future crops of timber. The record fails to show that these forests in the Western States have ever been put under administration or been given adequate forest protection.

And what about the public lands of Alaska? The Department of the Interior now has exclusive jurisdiction over the forests on the 300,000,000 acres of unreserved Public Domain in Alaska. Such forest lands are largely in the interior of the territory and are known to cover a vast area. We search the reports of the Department of the Interior in vain for reliable data regarding such forests, how much land they cover, the quantity of timber, the condition of the timber, how much forest, how much burned, how many fires a year. What provision has been made for their conservation? Why are fires allowed generally to burn uncontrolled until they burn out or are extinguished by rain or snow? Why are such vast resources treated as a no-man's land? Why is a region equal in area to Norway, Sweden, and Lapland combined, not being sufficiently protected and perpetuated against the needs of a future population?

Only the Department of the Interior can answer these questions. Let Secretary Ickes answer.

# A PAPER COMPANY PROGRAM

TO THOSE interested in forestry, the phenomenal increase of paper mills in the South has raised the question—"What will this new development mean to the timber supply in the South and what steps will be taken by the industry to maintain in perpetuity the wood producing capacity of southern forest lands?"

The southern development in paper manufacture is now well distributed over the southeastern states and it would be premature to attempt a broad answer. In the case of one company, however, the answer already has been made.

On the outskirts of Savannah, the Hermitage Mansion was a show place of the South for generations. Today it has been replaced by a huge, modern paper mill. The third unit of this mill was finished last fall, at a total cost of about twelve million dollars. Thirty-five hundred people have found work in the mill, or in the timberlands surrounding it. With their families, they represent fourteen thousand people who rely on this one enterprise for support.

About three hundred thousand cords of wood will be fed into one end of this mill each year. After it has been cut into chips, cooked to separate the fibres, and run over a paper machine, it will come out the other end in the form of paper bags and kraft paper in rolls. That means a daily consumption of about nine hundred cords of wood. Where is it coming from, and what steps will be taken to provide a perpetual supply of wood?

The mill is the property of the Union Bag and Paper Corporation, the management of which has recognized that with an investment of twelve million dollars in a paper plant a definite conservation program is necessary to insure permanency of the mill operations and the fourteen thousand people dependent upon it for livelihood. The company, therefore, has recently initiated a conservation program which has as its central objective the growing of continuous crops of pulpwood and other forest products.

An interesting feature of this program is that it is designed to promote the growing of timber not only on company lands but on forest lands owned by others as well. A good share of Union's wood supply will come from company-owned timberlands; the rest will come from privately-owned land. Pulpwood is being bought from farmers over a very wide area surrounding Savannah. In making these purchases, the same conservation methods will be enforced as on company-owned lands. Such purchases will be spread over as large an area as transportation costs will permit, in order to avoid the necessity of over-cutting any part of the area from which the company will draw its wood supplies. Special effort is being made to avoid over-cutting in the area closest to the mill.

In some cases, purchases from the farmers are in the form of pulpwood; in others, the timberland is leased from the farmers, and the actual cutting done by contractors under the direction of the paper mill management. In either case, definite measures are being taken to encourage proper cutting methods to insure the conservation of the wood supply. The evidence of the carrying out of these plans is present on the ground in the form of low stumps, no waste in tops, utilization of worked-out turpentine trees, and in other ways.

How can conservation methods be carried out on privately-owned lands when the cutting is done by contractors? The contractors doing the actual cutting have been given a clear understanding of the company's program, and it is their responsibility to see that this



Second-growth pine, harvested according to the plan to safeguard and provide a constant supply of pulpwood

program is carried out. As a further check, a system of company inspection makes sure that the conservation program is actually complied with.

Land owners are invited to make complaints where they see errors or injustices in cutting procedure, and immediate steps will be taken to correct them. Owners are also encouraged to seek advice of outside agencies as to the best methods of cutting in order to retain high productivity. Where the owner has his own plans for the preservation of timber tracts, every effort is being made to cooperate in carrying out these plans.

The organization believes that the most important step in any conservation program is to leave enough young trees well distributed over the cutting area. The real crux of its program is this constantly growing stock of young trees—under seven inches in stump diameter—scattered over all areas, whether on privately-

# MITTS TREE FUTURES

By M. S. KAHLER

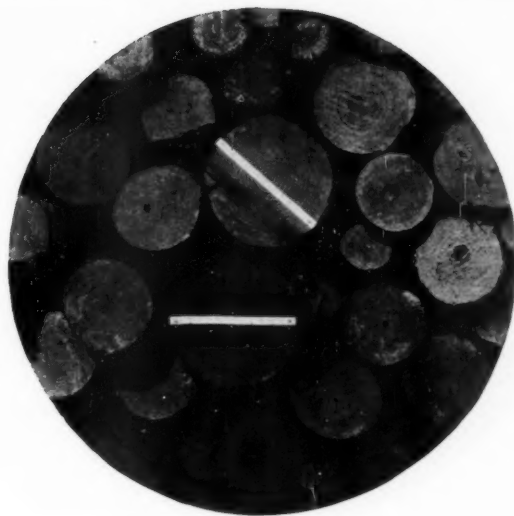
owned or company property. Where young trees are scarce, seed trees are left to the number of eight to the acre, and as well distributed as possible. Youthful trees are protected, too, by exercising care in the locating of truckways so as to avoid injury to them.

On company-owned lands, every effort is being made to maintain a high state of productivity for all products that will be produced. This includes, besides pulpwood, naval stores, poles, piles, veneer blocks and sawlogs. A separate organization has been set up to supervise the forestry end of the business. Several members of this Land and Timber division are former members of the United States Forest Service. All are experienced forestry men, to whom the subject of conservation is of great importance.

The ravage of fire is one of the greatest drawbacks to any forestry development plan. Even a small fire kills off the struggling youngsters, and it may impair the fertility of the area for years to come. A real forest fire will do immeasurable damage. For that reason, fire fighting is one of the most important responsibilities of the company's forestry organization.

Complete fire control is being effected through cooperation with the government. Fire towers house look-outs who are constantly on guard for a lick of flame or a wisp of smoke. Telephone lines and short wave radio flash warnings to affected areas. Truck trails and permanent fire lines are being extended as rapidly as possible. Labor crews for the suppression of fires are constantly on the job. In addition, the company supports local timber protective organization work. As further protection for young trees, efforts will be made to control grazing. If other methods fail, any abused areas will be fenced.

As a means of promoting good standards of protection, improvement, and utilization of company lands, local districts have been segregated in units of some 50,000 acres. A superintendent is in charge of each



Pine pulpwood — potential paper

unit, and he has a resident labor force large enough for current improvement, maintenance, and fire suppression work. There are also trained men for such work as cruising, surveying, marking of trees for cutting and cupping. Each superintendent has supervision in his unit of all timber cutting for pulpwood, sawlogs, and other forest products.

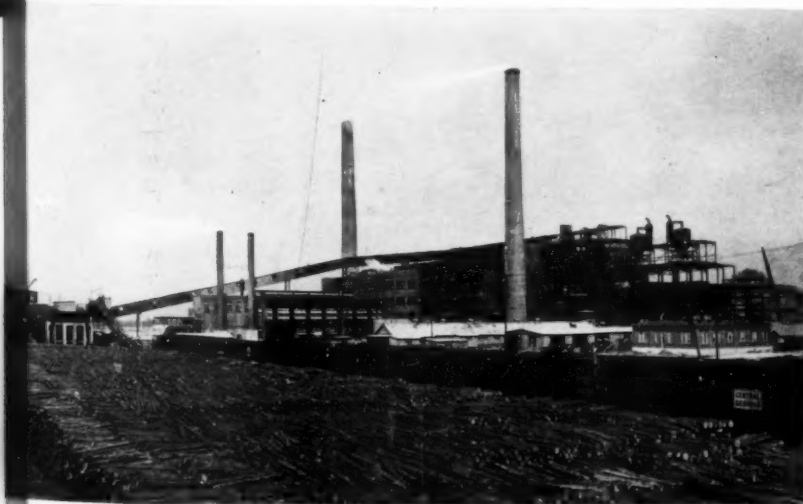
As far as possible, pulpwood will be derived from thinnings and partial cuttings, from tops of trees cut for sawlogs, from worked-out turpentine trees, and from large non-turpentine pines which are too rough or defective for sawlogs. All of this, of course, is salvage of formerly waste material.

Company holdings will, of necessity, carry many trees which are without silvicultural or economic value. By occupying the ground, they prevent more valuable trees from growing. Full utilization of the soil dictates that such trees should be eliminated. Open areas will be planted, and dense young stands will be thinned out as additional cultural measures. The maintenance of year-round labor crews will insure improvement work of this nature.

With extensive holdings in the state of Georgia, the company has been brought into naval stores operation, the production of high grade sawlogs for lumber manufacture, and the production of other forest products. With the purpose of producing pulpwood, naval stores, sawlogs and other forest products, all phases of company operation are being coordinated for sound operation and the insurance of future productivity.

Many of those who are vitally concerned with the conservation of southern forests have agreed that Union's program is one that may well be followed as a standard for the proper utilization and future development of southern timberlands generally.

The plant on the Savannah River, where a thousand cords of pulpwood a day are handled





A lazy morning in the Gulf Stream—blue water, piled clouds and circling boats

## WATCH THE BAIT!

By CARLETON MITCHELL

"... and don't forget what I said about watching your bait," continues the guide. "You have to see 'em to sock 'em. Now, do you remember everything?"

You nod, shifting the grip on your rod and hitching up the harness. Your eyes flick from the skittering bait to the clothespin on the outrigger, and for a moment you watch it trace lazy arcs across the piled clouds. You look back to the bait and wait for the gliding sickle fin of a blue marlin.

Beyond, to the eastward of where you are trolling, lies Bimini. A perfect spot for big game fishing! The Gulf Stream, rolling up between Florida and Cuba, offers a natural course for migration: the water is deep right up to the chain of islands, and behind them lie the Great Bahama Banks where small fish are plentiful.

Other circling boats are astern and on either beam. Deep sea fishing is a sport that has many devotees, and Bimini is acknowledged as the finest "hot spot" in the world. You lack neither companionship nor competition.

But you're sitting there, feet braced, holding a rod like unto a small derrick, waiting for action. If it is your first venture, you are a little in doubt about your tackle. You have heard of big game fishing as one of the finest of sports, but you wonder if it is really sporting to use

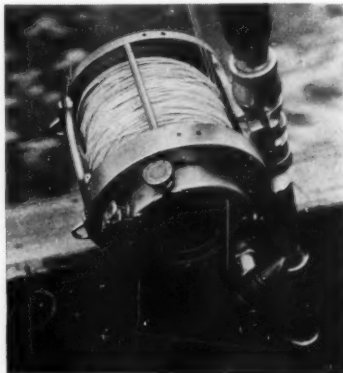
such heavy equipment. The fish, you think, should have a fighting chance: you are sitting in a specially built chair with footrests and a rod socket; a leather harness is snug over your shoulders and back, and is hooked into the reel; the reel is about the size of a drum—what chance has a mere fish against such scientific gadgets?

"Watch it!" barks the guide.

A fin is knifing through the water. Closer it comes, somehow menacing in its effortless glide, until you can see the purple bulk below. There is a swirl of bright foam at the bait, and your line comes drifting down from the clip on the outrigger.

"Hit him!" suddenly commands the guide. You jerk back on the rod with all your strength. "Again!" You slam. "Again! Again!"

With that first heave things began to happen. The mate gave the engines full power, to help you set the big hook. The guide took the back out of the chair so that you could get plenty of leverage. And far astern was a submarine eruption—a huge twisting body appearing in a fountain of spray. The boat slows and turns so that your line is over the quarter. The reel screams as heavy line is stripped off, and your rod tip jumps under the strain. You are dragged from your chair by





the fury of that first run. You brace yourself against the stern combings and fight to keep yourself in the boat.

Up! The marlin jumps cleanly from the blue water and is silhouetted for a long second against the white clouds beyond. Down! And you hold desperately, every muscle creaking with the strain. Up again! The marlin seems to dance across the surface on its tail, and you can clearly see the powerful shaking head and glistening body.

The marlin drops back into the water and begins a long run. The boat circles and follows, and you watch the long curve of your line as it disappears into the shadowy depths. There is a pause and you begin to get in line. You lower the tip of your rod and heave—feet braced; harness helping the muscles of your back; arms and hands and shoulders doing their share—and manage to raise the rod a couple of feet. You lower it quickly and reel in the precious bit of line that you have gained. And then heave again for another couple of feet. It is heavy work and the strain soon tells. You think of the hundreds of feet of line out there and it seems hopeless.

You suddenly fall back and your line goes slack.

"Hook pulled out," says the guide ruefully. At the moment you aren't certain whether to be pleased or disappointed, but, by the time you have relaxed long enough for a fresh bait to be prepared, you are overwhelmed by your misfortune. You are then a deep sea fisherman, and henceforth will live only when seated on the stern of a cruiser.

Big game fishing is one of the most personal of sports. The heavy tackle that surprises a novice is not unfair to the fish, but merely gives the fisherman a fighting chance. There are no elements that detract from the personal nature of the battle. Notwithstanding guides, technique, and tackle, the fight is between one man and one fish. Tackle is only the connecting link, and both adversaries have full use of their courage and power. The best fighter wins! In this respect, deep sea fishing is more sporting than big game hunting, where, unless the hunter gets "buck fever," a single well directed shot can end all.

World's record blue and white marlin, kingfish and bonefish were caught in Bimini waters. The biggest North American mako shark was boated there. Only the tuna record is well below the world mark. Monster tuna—undoubtedly surpassing anything ever landed anywhere—migrate northwards every year in May and June, but two great difficulties confront anglers: the tremendous depth of water makes it almost impossible to check the first run, as a hooked tuna will almost invariably sound; or the ever-present sharks mutilate them. It is generally conceded by experienced fishermen that it is much harder to boat a four hundred pounder in the Gulf Stream than one double that size in shoal water, as off Nova Scotia.

During the past few years tackle has been greatly improved. When Bimini first came into prominence, there was almost no equipment that would stand up under the terrific first runs. The bearings would burn out of reels or rods would break. Hooks straightened, leaders parted, swivels snapped. As mechanical aids were improved, guides and fishermen learned proper technique. However, the sport still has not been mechanized (Continuing on page 32)



Fisherman with a blue marlin weighing 198 pounds caught in the Gulf Stream



A de luxe fishing chair in a Bimini cruiser. Note adjustable footrest and rod socket. The chair back is removable and the reel against the far rail has built-in butt and rod socket



WILLIAM B. GREELEY

## COMMON SENSE IN CONSERVATION

### A Comment on the Bill for Reorganization of the Federal Departments

By W. B. GREELEY, Secretary-Manager,  
West Coast Lumbermen's Association

ONE OF THE issues presented by the Government Reorganization Bill, now before Congress, is the transfer of the National Forests, and possibly other activities of the Forest Service, to the Interior Department. Many people wonder why the voice of West Coast lumbermen is raised in protest.

This is not a partisan question. Our viewpoint should not be influenced by either Republican or Democratic leanings, by our support of the New Deal or our opposition thereto, or by our regard for any member of the Cabinet as compared with another member. It is a long-range question, running far beyond any present clash of policies or personalities. We should look at it from the standpoint of efficiency in an important field of public business.

Forestry is something very vital and practical to the Pacific Northwest. Upon it rests the future usefulness of about one-half of our land and a like proportion of our industry, employment and community prosperity. We have been deeply concerned, from the outset, in all forestry undertakings of the National Government.

The timber owners and timber-using industries of Oregon and Washington have not only been directly affected by Federal conservation measures, but have had a growing part in them. And the same has been true of the expanding activities of our State Forest Agencies.

With mingled feelings of approval and opposition, we saw large Forest Reserves created from the Public Domain. In 1905, we saw them transferred to the Department of Agriculture and converted into National Forests, *for use*. We have had a substantial part in developing the cutting, protection and reforestation methods on these national holdings.

Then came the cooperative plan for protecting all forest lands from fire, now the corner-stone of American forestry. It originated with the timber owners of the Northwest. It began with protection associations privately formed and financed. It was extended by State laws. It was first recognized by the National Government through a meager provision in the Weeks Act of 1911. It was lifted to front rank as a national policy of conservation, applying to all forest lands in the United States, by the Clarke-McNary Act of 1925. We take justifiable pride in the fact that through all the formative years in developing the policy of cooperative protection, its stimulus, its guiding principles and improvements in its application came largely from the Western Forestry and Conservation Association, backed by the timber owners and forest departments of five western states.

We have also seen the Forest Service expand its research in forest protection, in timber growing, in timber utilization, in forest taxation, in the economic and business factors of reforestation, in the practical application of sustained yield to commercial properties. In all of these, forest industry has had a part; has contributed much to the sum of today's knowledge.

The direct part of forest industry in the conservation regime has greatly expanded in recent years. Fire prevention and reforestation were accepted as obligations of industry under the N.R.A. Lumber Code. Our own rules of good protection and forest practice were drafted and put in force. Foresters were added to the staff of the local associations of loggers and lumbermen. When N.R.A. cracked up, the northwestern forest industries carried on, as a voluntary activity, their Code commitments for protecting and regrowing timber.

And in this, as in almost every undertaking for better forestry in the Pacific Northwest during the last thirty years, we have put in practice our proven principle, of three-way-cooperation,—private industry, the State agencies and the Federal Forest Service working together for a common end.

From this historical sketch, I would make three observations.

The first is that the forest industries of the Pacific Northwest not only have a vital stake but an active share in forest conservation. They have been in the thick of it from the start. Here is one field of public business in which forest industry is an experienced and expert witness.

In the second place, success in forest conservation requires a practical and continuing partnership between industry and Government. That has been the prime mover in American forestry; and nowhere more effective than in the Pacific Northwest. The lumbermen and Forest Service have worked together for over thirty years. They have pooled their experience, ideas and methods. They have criticized each other with utmost frankness, fought on occasion and remained friends. Each group has contributed much to the other.

Through all these years of common effort, industry and Government have reached, in the Pacific Northwest, a working understanding and cooperation which is one of forestry's greatest assets. We don't want to have that asset destroyed or diminished by a reshuffle of administrative agencies at Washington under any theory of governmental reorganization.

A third observation has (Continuing on page 46)



Photograph by Helen E. Miller

## PHOTOGRAPHING TREES IN WINTER

By RAYMOND A. WOHLRABE

BRANCHES bent with their burden of glistening snow; black, naked limbs of the hardwoods penciled with pearl; forests clothed in a mantle of white—all have been the theme of poets, and each has been a subject for photographers.

To capture any one of these subjects with the camera is not an easy task. Not that there is difficulty in finding subjects; nor are unusual lighting effects rare. The winter sun riding low in the sky builds fantastic shadow patterns that add much to the charm of the finished print. The difficulty lies in exposure—the exposure that will permit the faintest suggestions of shadow to etch themselves upon the sensitive photographic film.

A snow scene without shadows can claim very little artistic appeal. The dominance of white—uniform, monotonous white—builds a flat, uninteresting picture. Shadows, however faint, break this monotony.

Just what must a photographer do to capture these? First, the kind of a day that is best for hunting picture prospects of this type is crisp cold with a winter sun flooding the forest with light. The hour most certain to insure success is an early morning hour—shortly after sunup. The crust of newly fallen snow will not have had a chance to melt and slip from the branches. Too, early morning hours bring longer, drawn-out shadows. They are shadows that are easier to photograph than the light delicate shadows that come with mid-day. The less intense light of an early morning hour in winter forms shadows that register well on the photographic film. Late afternoon, of course, as far as the condition of the light is concerned, follows as the second best time of day for this kind of work.

Having shadows patterned upon the snow is no

guarantee of having them patterned also in the image that is fixed in the sensitive film when exposure is made. Snow is a good reflector of light. Very little time is required for it to make an impression upon the light sensitive chemicals of the film. A long exposure, even an exposure of ordinary length, will give the white of faint shadows a chance to make a strong impression on a film.

Long exposures blot out or dim shadows appearing on a snow surface. There are two ways of preventing this. One is by using a K2 yellow filter with the regular exposure time; the other is to use a very small stop, around f8 or f11, and a shutter speed of about one one-hundredth of a second. Such an exposure will not afford time for the white of faint shadows to record and the large areas of snow appearing in the picture will not be a uniform, monotonous white. In high altitudes, however, the speed of the shutter will necessarily have to be increased somewhat.

The attractiveness of a photographic masterpiece showing trees and snow can be greatly increased if some consideration is given the choice of materials used in the finished print and the choice of the process used in making it. If the texture of paper can add to a photograph's ability to put across the feeling of reality, why not use it? Dull surfaces, and there are a great many varieties of dull surface papers among the professional papers at the commercial photo-finishers command, add richness of tone and softness to a print. Glossy prints are too harsh to appear natural. Also, if snow pictures are redeveloped in blue, using the ordinary blue-toning process, the combined effect of the deep blue, the pure white of snow patches and the pale blue of light shadows add charm.

## EASTERN RED CEDAR

*Juniperus virginiana*, Linnaeus

BY G. H. COLLINGWOOD



The slender columnar form of Eastern Red Cedar is most frequently seen, but with age the crown becomes broader and more open

FENCE ROWS along pastures and abandoned fields, dry gravelly slopes, rocky ridges, limestone outcroppings, and even swamps and lake borders over most of the eastern half of the country from the Atlantic seaboard to the Great Plains are frequently punctuated with the dense evergreen pyramids or columns of eastern red cedar.

Ordinarily a tree twenty to fifty feet high with a short trunk one to two feet in diameter, on alluvial soils in the southern states it may attain 120 feet of height and produce a deeply fluted trunk four feet in diameter. On poor soil in the north red cedar may live for years becoming scarcely larger than a bush. Growing slowly, trees sixteen inches to two feet in diameter may be 130 to 150 years old, but the larger ones live 300 years or more.

A juniper rather than a true cedar, this *Juniperus* was distinguished by the name *virginiana* because the first botanical specimens were from the Virginia colony. The family is one of great antiquity, and the early forms of some thirty-five known species are found in glacial deposits throughout the world. None occur or were ever found south of the equator. Of the eleven species native to the United States, red cedar is the most widely distributed and most important.

Each tree bears two forms of tiny evergreen leaves. Those on seedlings and vigorous twigs are sharp pointed and awl-shaped, while closely overlapping scale-like ones clothe the major portion of a tree and press hard against the twig in opposite pairs. They remain five or six years on the branches growing browner with each year.

From February to May small inconspicuous male and female flowers appear on different trees, and occasionally on the same one. From the pistillate bloom a dark blue, fleshy, highly aromatic, berry-like cone develops, with one or two, and rarely three or four tiny chestnut-brown, wingless seeds. By early autumn of the same season that the tree blooms, the green berries mature to a dark purplish blue covered with a white powdery bloom. Not only do these furnish



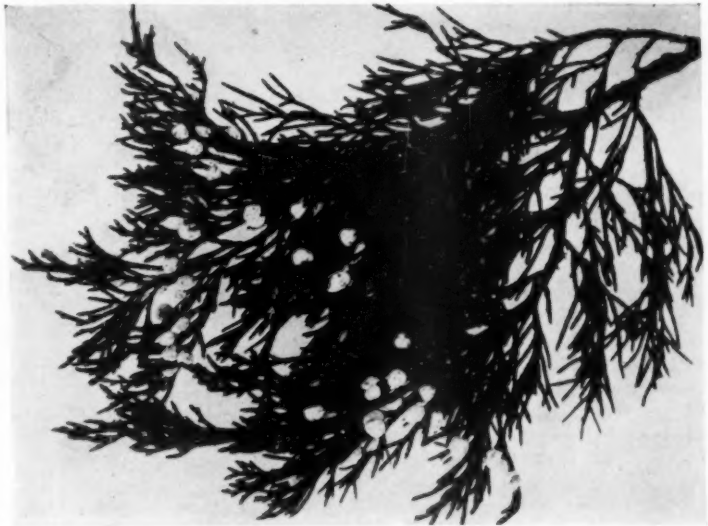
food for birds and small mammals, but they possess medicinal values and are used to flavor gin. Crops of berries are abundant every two or three years, but only one-third to two-thirds of the seeds are capable of germination. Natural reproduction of red cedar is only by seed, which are often scattered by birds.

The shreddy, light reddish brown bark is scarcely more than one-eighth to a quarter of an inch thick. The trunk is often so grooved as to suggest hardship, and the bark peels off in narrow fibrous strips. The reddish bark and wood led the French of Canada to call this cedar *baton rouge*, meaning red stick. Finding the same tree in Louisiana, they gave its name to their capital, Baton Rouge.

The slow-grown, fine-grained, brittle wood of highly aromatic quality is bright pinkish red to deep reddish brown, surrounded by a thin layer of nearly white sapwood. A cubic foot when air dry weighs only thirty-one to thirty-three pounds and because of its soft texture, easy working qualities, fragrance, ability to take a high polish, and durability finds an active demand for lead pencils, lining for clothes chests and closets, cigar boxes, canoes, and a wide variety of wooden-ware. Cedar oil is distilled from the leaves and twigs. The scattering stands prevent any satisfactory estimate of the existing volume of red cedar, and for the same reason the commercial production is largely in the form of small lots of short logs which farmers haul to local markets. A partial inventory of red cedar cut and marketed during 1935 reports a total of 14,082,000 board feet, of which the bulk came from Tennessee, Virginia, North Carolina, South Carolina, and Kentucky.

A few destructive boring insects feed on living and dead trees and bagworms occasionally eat the foliage. The chief enemy, however, is fire, for the thin bark and shallow root system leaves red cedar an easy victim of relatively light surface fires. In mixture with other trees such as the ashes, maples, oaks, hickories, beech, loblolly pine, black gum, and cypress, it is less seriously affected by fire. Wood rots do considerable damage to southern trees, and as the alternate host of the cedar apple rust it is considered a menace wherever apple growing is of first importance.

Extensively used for ornamental planting, over thirty horticultural forms of red cedar are recognized. It will grow on almost any soil except that which is distinctly swamp.

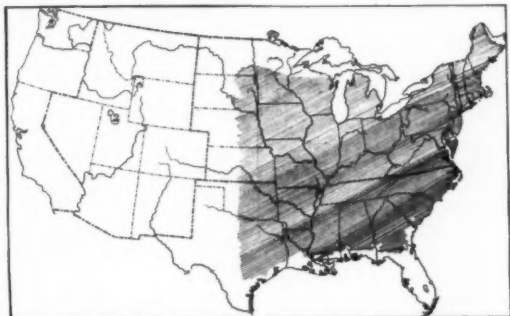


Ernest Crandall

Dark purplish blue berries grow on the sprays of tiny evergreen leaves of Eastern Red Cedar



The shreddy, light reddish brown bark is from an eighth to a quarter of an inch thick



Natural range of Eastern Red Cedar in the United States

## WATCH THE BAIT!

(Continued from page 27)

to the point where it is a completely one-sided contest: those that "get away" are more numerous (and bigger, as in other branches of fishing) than those brought in.

The trolling technique is almost standard among Bimini guides. Whole bonefish are used for bait. Part of the gill structure is removed and the fish cleaned through the opening; the hook is inserted and brought out through the belly, and firmly sewed into place. The mouth is sewed around the wire leader, and a bridle made by passing a needle through the head just behind the eyes, and both ends of this line are tied to the leader. The bridle takes most of the strain, so that the bait "wiggles" freely.

All boats are equipped with long bamboo outriggers with a clothespin on the end of a half-yard. The bait is allowed to run astern about sixty feet, and the line is clipped into the clothespin and hauled aloft. This keeps the bait clear of the boat's wake and also makes it ride the surface. Sometimes, when conditions are favorable, kites are used for the same purpose.

As marlin are "bill" fish they slash at the bait with their long snout. This pulls the line from the clip so that the bait realistically goes dead, and they have time to take it into their mouths before the line comes taut. From then on, it is distinctly up to the fisherman.

A fish presented for record must be boated without aid—except that the guide may take charge after he can touch the leader. But the angler can not have the rod tied down or help in lifting it when pumping. Also, fish mutilated by sharks are not eligible for record, as it is reasoned that the fisherman received assistance—even though unwillingly—without which he might not have been successful.

A newly formed organization, the Bahamas Marlin and Tuna Club, will tend to regulate equipment and ethics. It is headed by some of America's outstanding game fishermen, including Ernest Hemingway, Michael Lerner, and S. Kip Farrington, Jr. Much of the present success of big game fishing can be attributed to these men. One of the aims of the club is to encourage the freeing of fish that are obviously too small for record consideration.

Deep sea fishing is becoming more popular every year. The ranks of the Bimini old-timers are being constantly augmented by newcomers, and, once initiated, they always come back for more! It is hard to conceive of a better sport, or more pleasant days. Trolling around is lazy and peaceful, but there is always the chance of excitement and action just over the next wave. You never know what is there, so you must watch the bait!

## GIVING THANKS FOR TREES

ALETHA M. BONNER

God of the Forest, Gracious Lord,  
To Thee we voice our thanks,  
For trees that clothe the naked earth,  
And guard the river banks;  
That give so freely of their shade  
To city park and street;  
That shelter man from winter's blast,  
And from the summer's heat.

We praise Thee for the oak's great strength,  
And for the willow's grace;  
We thank Thee for the purity  
Found in the birch-leaf's face.  
For singing trees, tuned with the wind—  
These make our hearts rejoice;  
For trees in poetry and art,  
Our gratitude we voice.

## TREES AND THEIR USES—No. 30—EASTERN RED CEDAR



**EASTERN RED CEDAR GROWS** THROUGHOUT THE EASTERN HALF OF THE UNITED STATES FROM MAINE TO NORTH DAKOTA AND SOUTHWARD TO EASTERN TEXAS AND FLORIDA. TREES OF FROM 40 TO 50 FEET HIGH AND 2 FEET IN DIAMETER ARE NOT UNCOMMON IN THE RICH ALLUVIAL BOTTOM LANDS OF THE SOUTHERN AND SOUTHWESTERN STATES. THE WOOD, A BRIGHT PINKISH RED, FADING WITH EXPOSURE TO AIR, IS FRAGRANT, AND DURABLE IN CONTACT WITH THE SOIL. RED CEDAR HAS BEEN USED SO LAVISHLY IT HAS BECOME INCREASINGLY DIFFICULT TO SECURE IN LARGE SIZES. LARGE QUANTITIES OF RED CEDAR ARE CUT AND SET AS FENCE POSTS, BUT ITS MOST DISTINCTIVE USE IS AS A PENCIL WOOD. FOR THIS PURPOSE EASTERN RED CEDAR HAS NOT BEEN EQUALED AND THE AVAILABLE SUPPLY CAN NO LONGER

**MEET THE DEMAND FOR PENCIL SLATS.**

THE FRAGRANCE OF THE WOOD AND ITS REPUTATION FOR KEEPING AWAY MOTHS MAKE IT EXTREMELY POPULAR FOR CHESTS, WARDROBES AND CLOSET LININGS.

CANOES ARE FREQUENTLY LINED WITH RED CEDAR AND SMALL BOATS ARE TRIMMED WITH IT. ITS USE IN INTERIOR FINISH, WHILE ONCE IMPORTANT IS DECREASING BECAUSE OF THE DIFFICULTY OF GETTING SATISFACTORY STOCK.

THE YOUNG CEDAR HAS A PLACE IN MANY HOMES AT CHRISTMAS TIME.

—FADER—



# **SPEED**

## **YOUR CHOPPING WITH A PLUMB**

Feel how that flashing, keen steel blade bites into the wood! The song of a Plumb Axe spells *s-p-e-e-d*! Faster! Faster! *Faster!* With a Plumb you shatter your previous, fastest chopping time.

"The Plumb saves me 20% in chopping time," says Peter McLaren, America's Champion Chopper. "Even my opponents in chopping contests cut their time when I hand them a Plumb. It certainly is the Axe of Champions."

This super axe saves *your* time and energy. Perfect "hang" of head and handle give you a feeling of ease and confidence. The axe swings in natural rhythm with your arms. Blade is scientifically tapered to **ROLL** chips away and free axe for your next blow. Specially tempered steel stays razor-sharp longer.

Get a Plumb from your hardware dealer or supplier. Feel the comfort of it. Try it in actual chopping. Know the thrill of using this *Axe of Champions*. Look for the Red Handle and Black Head.

FAYETTE R. PLUMB, Inc., Philadelphia, U.S.A.

	<p><b>DREADNAUGHT SINGLE BIT MICHIGAN</b></p>
	<p><b>CHAMPION SINGLE BIT DAYTON</b></p>

One-piece head of high-grade steel—not two pieces welded together! Hardened for depth of two full inches. Toughened to hold keen edge. Furnished in 3 to 5 lb. weights.

Fan-shaped, three-point grind gives better clearance in cut. Hand-honed bit prevents crumbling and dulling, removes wire edge. A racing axe for the expert chopper. 4 lb. weight only. Other patterns and sizes for every chopping need.





## THE RANGER'S CORNER

There are eighty-two thousand acres of virgin hardwood forest in Madison Parish, Louisiana. Trees at the seedling stage mix with grizzled old monarchs of five hundred years or more — veterans that tower a hundred and fifty feet above the seedlings. Vines of every species known to swamp lands add to the density of the forest; so does the moss hanging from every branch. Wherever there is an open space large enough to permit a shaft of sunlight to penetrate to the ground, wild peas grow in abundance. It is on these peas that the deer feed during the winter.

This great forest area was made a game reservation in 1926 and, under the administration of the Louisiana Department of Conservation, a program of wildlife protection and restoration was inaugurated. In the timberlands the big deer shared their domain with big bear, and they both shared with wildcats and lesser animal life. Bird life was abundant.

It was into this wilderness I set out, on vacation, in the fall of 1924 — two years before the establishment of the area as a game refuge. I was without a set plan — a little fishing here, a day or so hunting there, and a day loafing most anywhere I felt like it. It was ideal, and I was thoroughly enjoying myself until one day, much to my amazement, I discovered that I was lost.

It was late in the afternoon and, I must confess, I sort of lost my head. As is the habit of man when he finds that he is lost in the forest, I forgot all the things that past experience had taught me and started to mill around in circles.

I was still milling around when night came — and night in that forest was night at its blackest. One might just as well attempt to look through a brick wall as to see through that blackness. Even the stars were cut off by the crowns of the trees, covered as they were with moss and leaves. The only way I could determine direction was by feeling the trunks of the trees I would walk into, knowing that moss was heavier on the north side.

For hours I walked in this inky darkness, looking no longer for my camp but for some way out — any way out! There were no roads through the forest, I knew, but there were three farm houses scattered on the outskirts of the area. If I could only find one of these!

Suddenly I saw it — a light! It was one of the farm houses! But no, it was a reflected light — and some distance away. Anyway, I started toward it. Whatever it was, it meant people, I reckoned, and relief for me. So on I tramped.

Every now and then, in some inky pocket of the forest, I would lose sight of the light, but plunged on blindly to come upon its glow again. Finally, after I had pushed along for several miles, the reflection became alive and it suddenly dawned upon me that I had fought my way

### ALONE WITH A BEAR

*In the Middle of a Louisiana  
Lake a Man and a Bear Share  
the Same Log While Around  
Them a Virgin Forest Burns*

By E. M. Thornton

through the dark jungle to stand face to face with a forest fire.

For a moment I was actually stunned — though I should have known it in the beginning. The reflection I had followed could only have come from a forest fire. Had I not been lost, had I been in a responsive state of mind, I am sure I would have known it. However, there was nothing to do now but face it. And, strange as it may seem, I was suddenly aware that the "lost" feeling had vanished.

But my calm was only for the moment. I had underestimated the fire; or rather, in my mental fog I had failed to notice its size and viciousness. It was no ordinary fire; in fact, of a sudden it became one of the most appalling sights I had ever seen. It was not directly in front of me, as I had first supposed, but it spread out over a front of at least two miles. And it was eating into the virgin forest with unchecked speed and fury.

Why I did not move out of its path right away may undoubtedly be attributed to the stunning effect the size and sudden movement of the fire had on me. I just stood there watching, under the spell of a dreaded destroyer. Not that a forest fire was new to me, of course, for in my work with the Louisiana Department of Conservation I had spent enough hours fighting forest fire to be thoroughly familiar with its evil ways. It was the suddenness of the thing, the surprise.

The element of danger did not enter my mind until I was conscious of movement all around me and, in the glare of the approaching fire, saw the wild things of the forest fleeing for their lives. There were animals and reptiles of every description, birds and fowls by the hundreds, and insects by the million. Some of these unfortunates screamed in fear, others in anger. Birds became exhausted and fell to the ground, to be consumed by the flames. Vicious snakes, hissing continuously and crawling with amazing speed, headed for bayous, though some took refuge under logs to suffer a red hot death. And before I knew exactly what I was doing, I was racing along with them.

How long this frantic race for life lasted I do not know. I remember suddenly seeing fire in front of me, of feeling hopeless, of thinking the thoughts most men think when they come face to face with sudden, violent death. And then the miracle happened. Off to my left appeared

what had once been a lake, now a large basin of mud and slime. I made for it with all the strength and hope remaining in me — and reached it just in time, just as the fire came down on me. Without considering anything I plunged into the mud and struggled toward the center of the lake.

When the heat at my back was less severe, I paused to take stock of my good fortune. The lake by this time was nearly surrounded by fire, and as disagreeable as the mud and slime was, I thanked my stars a million times for it. Then my eyes spotted a large cypress log that had been felled in years past by lumbermen. It rested in the mud about a hundred yards from shore and I made for it with the little strength I had left. As I crawled over it I uttered a sigh of relief.

I closed my eyes and settled down on the log in a desperate effort to regain my wits as well as my strength. But it was not my lot to rest. Behind me there was a commotion, like someone or something struggling in the mud. Quickly I turned — to look down on six of the largest alligators I had ever seen. They were splashing around in the mud and the less than a foot of dirty water that covered it. Then they disappeared below the muck to reappear a few seconds later closer to the log on which I had taken refuge. This process was repeated several times until the big fellows were practically at my feet.

I was getting right uncomfortable when a new noise came to my ears to complicate matters. Taking my eyes away from the huge alligators with some misgiving, I turned just in time to see a big black bear approaching. He appeared very cool and deliberate, and so far as I could determine, he was unconcerned about my presence on the log. Unfortunately, I did not feel the same way about him. Ignoring the alligators completely he splashed up to the stump of the log and pulled himself to the top of it, shaking the mud and dirty water from his coat. There he sat, surveying the world.

During my race with the flames I had somehow hung on to my rifle. But not till now was I aware that it rested across my knees. And what a discovery it was! I even considered bagging the bear so that I could have something to brag about when I returned home. But on second thought it came to me that it would be pretty poor sportsmanship to destroy an animal when it was making the same effort that I was to protect its life. As long as he was friendly, I finally resolved, I would not use my gun. So there we sat, both of us, hoping for the best.

Things would have gone along very nicely, I am sure, had it not been for my third visitor. The alligators, though they had a wicked look in their eye, amused themselves by diving down into the mud every few minutes or so. The black bear



was strictly minding his own business. But the wildcat that suddenly appeared out of the slime of the lake to crawl up on the log not twenty feet away from where I was sitting stirred up the whole situation. In the first place, there is a vast difference between a bear and a wildcat. A bear likes to be let alone; a wildcat's idea of a good time is to fight. So when I saw the cat flatten on the log I knew it was time for action.

I fired. The bullet struck the cat between the eyes and he fell into the muddy water. This brought on more trouble, for no sooner had the dead cat hit the mud than he was seized by one of the alligators. And then the whole lake around the log went mad. The alligator grabbing the wildcat was himself attacked by two other alligators. Others joined in, and still others, until the mud was alive with them.

All of this did not make me feel any too secure. And then I looked at the bear. It was quite evident that he did not relish the alligator brawl any more than I did. He was plainly nervous. To add to our plight the fire raging around the lake had reached its peak and it was very hot. It flared up, casting a red glow over the desperate struggle going on around us. To let off steam, to ease my throbbing nerves, I decided to take advantage of this red spotlight and shoot a few alligators. Not once, however, during the shooting did I lose interest in the bear. I kept one eye glued on him.

Apparently my marksmanship was good and I was discouraging to the alligators; for after a while, with several of their number quite dead from by bullets, they disappeared. That left only myself and the bear.

But he knew what was good for him and sat quietly on the stump until the fire died down, when he let himself into the mud and made toward the shore in the darkness. That was the last I saw of him. I dared not move. I knew it would be a day at least before the forest floor, burned to a foot or more in depth — through the mulch of rotting leaves and accumulations of the past fifty years — would be safe for me. So I set myself, at last alone, for the long wait.

Four years later I went back into this country with a United States Forest Service party, and in my wanderings I came upon very large bear tracks. Somehow or other I am sure the tracks belonged to my companion of the forest fire.



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# AROUND THE STATES

## FORESTERS ELECT KORSTIAN PRESIDENT

Clarence F. Korstian, Director of Duke Forest and Professor of Silviculture at Duke University, Durham, North Carolina, has been elected president of the Society of American Foresters to succeed H. H. Chapman, of the Yale School of Forestry, who has served for the past four years. The election was announced at the annual meeting of the Society held in Syracuse, December 16, 17 and 18.

William G. Howard, Superintendent of State Forests, New York State Conservation Commission, was elected vice president, and the following council members were elected for the coming two years:

Ralph C. Bryant, Yale Forest School; A. C. Cline, Harvard Forest; Joseph C. Kircher, Regional Forester, United States Forest Service, Atlanta, Georgia; Willis M. Baker, Director of the Central States Forest Experiment Station, Columbus, Ohio; G. B. MacDonald, Professor of Forestry, Iowa State College, and State Forester of Iowa; M. E. Krueger, Department of Forestry, University of California; R. H. Rutledge, Regional Forester, United States Forest Service, Ogden, Utah; F. H. Brundage, United States Forest Service, Portland, Oregon; and D. S. Jeffers, School of Forestry, University of Idaho.

F. A. Silcox, Chief Forester of the United States, was the only Fellow elected by the Society.

## NATIONAL FOREST PURCHASES

Approval for purchase of a total of 89,010 acres of land to be added to the National Forests, at a cost of \$281,330, was given December 16 by the National Forest Reservation Commission. The acquisitions are divided among twenty-four National Forest units located largely in eastern and southern states.

The Commission also approved an additional purchase of 20,985 acres containing 262,000,000 board feet of Ponderosa pine within the boundaries of the Ochoco National Forest, in Oregon, at a price of \$288,000. The purchase provided that the vendor would enter into an agreement with the United States to practice sustained yield forestry on 57,000 acres owned adjacent to the acquired tract. It was pointed out that the area offers an outstanding opportunity for joint federal and private sustained yield management of a large timber area, which will help to put local industry on a permanent basis and promote the stability of local com-

munity development. Purchases of 1,880 acres of land in the Arrow Rock reservoir area, in Idaho, and 2,654 acres in the Provo Unit and Uinta National Forest, in Utah, were authorized. Both areas involve acute problems of erosion.

Approval was given to federal acquisition of two areas totaling 81,613 acres

## TRAIL RIDERS ANNOUNCE TRIPS FOR 1938

Although actual dates will not be available until early January, The American Forestry Association has announced seven expeditions for the Trail Riders of the Wilderness in 1938.

Two new expeditions are included in the announcement—one in California and one for Colorado. The California party will explore the high Sierras in the beautiful Kings River country, just north of Mt. Whitney, and Death Valley, and south of Yosemite National Park. The Colorado party will explore the Maroon Bells—Snowmass Wilderness in the Holy Cross National Forest, a land of massive mountains, many of them 12,000 feet in elevation.

All of the expeditions of 1937 will be repeated, with the exception of the spring and fall trips in the Great Smoky Mountains. Thus the Expeditions for 1938, with actual dates to be announced later, along with costs, are as follows:

Expedition No. 1—Flathead and Sun River Wildernesses, Flathead and Lewis and Clark National Forests, Montana—early July.

Expedition No. 2—Wind River Wilderness in the Bridger Primitive Area, Wyoming National Forest, Wyoming—middle July.

Expedition No. 3—Maroon Bells—Snowmass Wilderness, Holy Cross National Forest, Colorado—late July.

Expedition No. 4—Gila Wilderness, Gila National Forest, New Mexico—early August.

Expedition No. 5—Sawtooth Wilderness, Sawtooth National Forest, Idaho—early August.

Expedition No. 6—Olympic Wilderness, Olympic National Forest and Monument, Washington, early August.

Expedition No. 7—Kings River Wilderness, Inyo National Forest, California—middle of August.

through exchange with the State of Michigan for land now owned by the Federal Government within state forest boundaries. One area of 67,363 acres will be acquired in the Marquette and Manistee National Forests by such exchange, and 14,240 acres will be obtained in the Hiawatha National Forest Unit. By one of the exchanges the State of Michigan will acquire lands which will facilitate the development of a proposed recreation area at scenic Tahquamenon Falls.

Acreages approved for purchase, by

regions, are as follows: Appalachian (Pennsylvania, West Virginia, Virginia, Kentucky), 25,000; Piedmont, 1,000; Southern Pine, 500; Ozark and Central Mississippi States, 14,000; Lake and Upper Mississippi States, 34,000; Idaho and Utah, 4,500 acres.

## MT. KATAHDIN PARK AREA ENLARGED

In furtherance of a long considered plan to give the State of Maine an extensive area of wild, unspoiled forest land to be held for the benefit of future generations, former Governor Percival P. Baxter has acquired 18,000 acres of forest land north of Mt. Katahdin, in Piscataquis County, which he will donate in trust to the State. His earlier donation of 6,000 acres surrounding Mt. Katahdin is now the Baxter State Park. The new gift will increase the Park to 24,000 acres, or more than thirty-seven square miles.

The recent acquisition is rough mountain country including within its borders Traveller Mountain, with an elevation of 3,300 feet, and numerous lakes, ponds and streams.

The Brewster Bill, H. R. 5864, introduced before the present Congress and proposing to create the Katahdin National Park of approximately 188,000 acres, would include these lands. Mr. Baxter has described this bill as an outrageous, fantastic affair, the purpose of which is to mislead the people of Maine into believing that a great National Park will be created if the State will break its promise to Mr. Baxter "to keep Mt. Katahdin forever a State Park."

## MEMORIAL ACTION FOR WYOMING FIRE DEAD

The tragic cost of the Blackwater Fire on the Shoshone National Forest, in Wyoming, last August 21 will be kept fresh in the minds of Shoshone visitors, by appropriate memorial action on the part of the Forest Service.

Recommendation has been made to the United States Geographic Board that Double Mountain, a prominent feature of the Blackwater drainage, be renamed Clayton Mountain in honor of Ranger Alfred G. Clayton, one of the fifteen men who died in the fire.

Winter quarters of the Tensleep Ranger District of the Bighorn National Forest, located in the town of Tensleep, will be named in honor of Ranger James T. Saban. The summer station of that ranger district, located near Tensleep Lake, will be named Tyrrell Ranger Station in honor of Junior Forester Paul E. Tyrrell. The Blackwater Campground at the junction of Blackwater Creek and the north fork of the Shoshone River, in the

Shoshone forest, has been designated Rex Hale Campground in honor of the Junior Assistant Technician who was in charge of a crew developing the campground when the fire call came. Clayton, Saban, Tyrrell, and Hale were among the fifteen men who lost their lives in the fire.

**NEW YORK SEEKS TO BRING LANDOWNERS AND SPORTSMEN TOGETHER**

Better cooperation between landowners and sportsmen, more wildlife research, and improved protection of the forests and the fresh waters of the state were urged by the fourth annual New York State Wildlife Conference, held in Syracuse, December 2 to 4, under the auspices of the New York Conservation Council.

Reflecting the active discussion of co-operation between the landowner and the sportsman, participated in by former United States Senator from Connecticut, Frederic C. Walcott; Major W. Gard Conklin, of Pennsylvania; and others, a resolution was passed authorizing the President of the Council to appoint three members on a special committee to study closer cooperation between landowners, sportsmen, and the state department.

**LUMBERMEN OPPOSE REORGANIZATION**

Taking vigorous exception to those sections of the Byrnes Bill, S. 2970, dealing with reorganization of the Federal Government which would affect the Forest Service, and the civil service system, C. C. Sheppard, Chairman of the Committee on Government Relations, told members of the National Lumber Manufacturers Association and the Southern Pine Association, meeting jointly in New Orleans, November 10 to 12, that if the plan for reorganization of the executive departments becomes a law, "it will concentrate into the hands of the Chief Executive the greatest power in the history of any man in the history of our country . . . This bill . . . would put the ICC under the domination and control of the Executive Department and move the Forest Service from the Department of Agriculture over to the Department of the Interior. No lumberman wants that to happen, and we must be active to prevent such a move."

Thereafter the following resolution was passed:

"The National Lumber Manufacturers Association asks that the Congress do not approve any plan or any proposed bill for reorganization of the Executive Departments of the Federal Government which will withdraw, or authorize the withdrawal, of any classification of federal employment from the limitations or protections of the Civil Service System; or which will cause or will permit the separation of forestry activities of the government from their present logical and fundamental relationship to other agricultural activities of the government."

James G. McNary, of McNary, Oregon, head of the Western Pine Association, was elected President of the National Lumber Manufacturers Association to succeed W. B. Nettleton, of Seattle.

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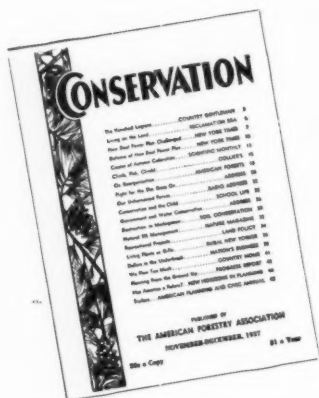
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**FORESTERS TO MEET WITH  
AGRICULTURAL WORKERS**

The thirty-ninth annual meeting of the Association of Southern Agricultural Workers will be held in Atlanta, Georgia, February 2, 3 and 4.

The Forestry Section of the Association will meet on the afternoon of February 2 in a session devoted to a symposium on recent forestry legislation as it affects the South. There will also be a joint meeting of the five southern sections of the Society of American Foresters, and, on February 3, the presentation of papers covering various phases of the pulp and paper industry in the South.

Arrangements are also being made for special group conferences of southern extension foresters, state foresters, lumbermen, and pulp and paper mill operators.

**CCC CAMPS REDUCED**

A program providing for the operation of 1,500 Civilian Conservation Corps camps during the January, February, March quarter of the current fiscal year has been approved by Robert Fechner, Director. As 1,604 CCC camps are now in operation throughout the country, 104 camps will be closed prior to January 1. Vacancies in the enrolled strength of the CCC, which will exist on December 31, will be filled by a replacement enrollment program beginning January 1.

While exact figures will not be available until later this month, preliminary estimates indicate that approximately 32,000 young men between the ages of seventeen and twenty-four will be needed to bring the enrolled strength of the CCC to 280,000, the maximum strength to be carried during the January quarter.

"The camp reductions are being made in conformance with plans prepared last year when the CCC appropriation for the current year was approved," Director Fechner said. "The funds appropriated were sufficient to maintain 1,849 camps during the first quarter of the current fiscal year, 1,604 during the second quarter and 1,500 during the final half of the year. Enrollees assigned to camps scheduled for closing will be transferred to other camps."

**AMERICAN FOREST FIRE LOOKOUT ON  
FOREIGN SOIL CLOSES UP FOR WINTER**

When the last lonely fire lookouts climb down from their isolated vantage points this month, they will haul down the flag of the land over which they have kept summer vigil.

One exception will be A. C. Mattison, Okanogan, Washington, who holds the distinction of being the only Forest Service lookout posted on foreign soil. Mattison is lookout at Monument 83, on the Canadian Boundary, Chelan National Forest. This station was built across the boundary line in Canada, as a result of a privilege which can be granted by no one except the British King.

It is a grand and inspiring view that Mattison looks out upon from his lonely perch. The largest primitive area in the North Pacific region, the North Cascade primitive area, lies just to the south, and the Canadian landscape to the north is

similarly rich in rugged beauty.

The Chelan National Forest supervisor reports that last year representatives of the Canadian government requested that the American flag not be flown from Monument 83 lookout house. Needless to say, the request was complied with, but Mattison asked for a British flag which he could fly in its stead. The British flag, however, was not received so a flagpole was erected some 125 feet in front of the lookout house, a location several feet from the international boundary on the American side, which made it eligible for the Stars and Stripes.

**CALIFORNIA NAMES REDWOOD**

The redwood, *Sequoia sempervirens*, has been named the official tree of California by action of the State Legislature.

Speaking in behalf of the measure, Senator J. J. Hollister, of Santa Barbara, said: "It is the tallest known living thing on earth; its natural distribution is limited almost wholly to California; it has been a most important asset in the building of our state; it is being grown successfully in parks and gardens throughout most of California and in many parts of the world; it is the most distinctive, the most stately, and most beloved of all our native trees."

Mississippi has also named a state tree—the magnolia. According to Fred B. Merrill, state forester, 16,000 school children voted to name the tree, more than 9,000 selecting the magnolia. The pine was runner up, with 5,000 votes.

**COMMUNITY CHRISTMAS TREES**

In the very comprehensive article on community Christmas trees by Mrs. Alma M. Higgins, published in the December issue of this magazine, her information was collected from many sources, and over a period of many years. The story of the first "Tree of Light" in New York was obtained from several articles, "What the Tree in the Square Heard," that appeared in the *Ladies Home Journal*, 1913; "Nation's Outdoor Christmas Trees," by Robert E. Livingston in *Gas Logic*; and from Mrs. Orlando Rouland herself, who for twenty-two years kept the thing a secret as to who originated the plan. Mr. Rouland is the New York artist mentioned in the story. The picture and the story about the Salem, Oregon, tree was sent to the author by Mrs. F. A. Elliott, Salem. The picture and story about the Riverside, California, tree was furnished by Mrs. Harold Norman Dunbar, the Wilmington, North Carolina, community tree picture came from Mrs. B. A. Hocutt of Clayton, North Carolina. Mr. F. C. Nash suggested the lighting of the mile of Deodars at Altadena, Mrs. B. G. Miller of Crete, promoted the planting of the living Christmas tree at Crete, and Mrs. John Clapperton Kerr of New York gave the information about the Riverside Park, New York, "Tree of Light."

The title on page 581 of the "Street of the Christmas Trees" should read Altadena, not Pasadena, and the carolers, beside the Illinois-Steel Tree, on page 584, are recruited from the South Works for the "eighty-ninth street celebration."



## WESTERN FORESTRY MEETING

Favoring a present federal legislative program of only immediately essential subjects, the Western Forestry and Conservation Association, meeting at Portland, Oregon, December 8, 9 and 10, by resolution approved the following:

Increase in authorization and appropriations for forest protection under the Clarke-McNary Law; appropriation of at least \$2,000,000 for carrying out the provisions of the Fulmer Act; provision for insect and disease control on public and private lands; provisions for a speedy completion of the Forest Survey authorized by the McSweeney-McNary Act of 1928.

The conference "deplored the present Forest Service policy of requiring private timber owners to adopt specific forest practices on their holdings in order to obtain timber under a government sale." Regulation of forest cutting, it was brought out, should be a self-function, supplemented by state law when methods are tried out and found good. It also asked that governmental agencies issuing publicity matter relating to forest use should studiously avoid unfair and unjustified reflections on industry practices until experiment and experience indicate that certain practices may be improved or abandoned.

Keynoted as a forest policy conference, the meeting was attended by representatives of forest owners and operators, fire protection associations, state forestry and land departments, the Forest Service, the National Park Service and others.

President G. F. Jewett set the stage for frank and interesting discussions by inquiring whether the Forest Service is moving toward cooperative treatment of forest problems in which private ownership is involved or in the direction of bureaucracy and socialization of forests. Citing examples of the sort of actions by officers of the Service, which cause doubt and misunderstanding, he called for a clear exposition of Forest Service attitude and policy.

This presentation was made by E. W. Tinker, Assistant Chief, Division of State and Private Forestry. Mr. Tinker assured the conference that the Forest Service will cooperate, that it desires private ownership to carry a large share of the forestry load.

Forest practice reports were featured by mention of Chief Forester F. A. Silcox's desire to have federal regulation of cutting private timber locally suitable and locally administered. It was brought out that of nearly \$2,000,000 expended in Washington and Oregon in 1936, less than one-fourth was contributed by federal and state agencies combined. Private outlay

for protection averages above eight cents per acre!

W. A. Horning, of the Department of the Interior, outlined work of the Department in preparing to administer O. & C. revested lands, under the O. & C. Act. It is expected that new regulations will be issued, ready for application by March.

## A ROUND-UP THAT FAILED

On December 7, the Washington (D. C.) *Daily News* published the following story, written by Max Stern, noted Washington correspondent:

"The story of a round-up that failed, in which Interior Secretary Ickes' men tried to ride herd on 100 western sheep and cattle men, is being told in the Capitol corridors.

"The stockmen were selected, on the basis of one cattle man and one sheep man from each of 50 grazing districts, and called to Washington for a conference. According to some of those who attended, the avowed purpose was to develop a uniform range code under the Taylor Grazing Act, and the added but unavowed purpose was to get the westerners behind the Ickes - Roosevelt measure changing the Interior Department to the Conservation Department and letting the President group all conservation services under it.

"On the last day of the conference Farrington R. Carpenter, chief of the Grazing Service, urged formation of a legislative committee. Whereupon one man from each of the eleven Western grazing states was named and called into executive session. Members of the Ickes staff spoke, urging them to pass a resolution indorsing the plan for a Conservation Department. And thereupon the conference exploded in a row lasting an hour and a half.

"Finally the stockmen unanimously adopted the following resolution:

"The Legislative Committee feels that this body should make no recommendations of a political nature. We are here for the purpose of considering matters pertaining to the Taylor Grazing Act only."

"The conference, which cost the Government around \$40,000, failed to agree on a uniform range code and voted to adopt separate regulations for separate regions.

"Secretary Ickes could not be reached for comment on the story. However, he and his staff have been openly campaigning for the name-changing measure, while Agriculture Secretary Wallace's men have been hostile to its purposes. Under it the President could transfer to the Ickes department the U. S. Forest Service, Soil Conservation and Biological Survey."

Up to the time of going to press (December 18) there had been no official denial by the Department of the Interior.

## 1938 ANNUAL MEETING

The 63d Annual Meeting of The American Forestry Association will be held early in May at the Chamberlin Hotel, Old Point Comfort, Virginia. Details of the program and points of interest will follow in subsequent issues of the magazine. Plan now to attend this meeting.

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- Development of Forestry Practices by the forest industries.
- Education of the Public, especially children, in respect to conservation of America's natural resources.
- Forest Recreation as a growing need for the development of the nation.

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# FOREST TRAVELOGUE



### WINTER SPORTS IN YOSEMITE

The winter sports program in Yosemite National Park, California, will get under full swing early in January when the ninth annual Pacific Coast Intercollegiate Winter Games will be held on the winter club rink. Speed skating and hockey games will be scheduled for this meet.

In mid-January one of the most brilliant skating events of the season will be presented on the outdoor rink by the St. Moritz and Oakland Figure Skating Clubs. The Yosemite Winter Club will assist in presenting these figure skating exhibitions.

The first weekend in February has been selected for the third annual Pacific Coast Intercollegiate Ski Meet for the Yosemite Winter Club trophy, with slalom and downhill events, while the Pacific Coast Open Ski Championships have been set for early March.

Throughout the season gold and silver ski tests and novice ski races will be held at Badger Pass. In addition to the third class British ski tests, second class tests will be given this year.

As a finale to the winter sports season, Yosemite will hold its Spring Invitational Ski Meet on April 2 and 3. Skiing exhibitions and competitions will also be held during Easter Week.

### THE BATTLEFIELD TRAIL

If you are going South and have a little extra time on your hands, the National Park Service gives you the "Battlefield Trail"—a historic tour along the Atlantic seaboard where much of the drama involving the discovery, colonization and settlement of America was enacted.

Beginning at the Statue of Liberty in New York harbor, the trail leads to the Morristown National Historical Park, in New Jersey, where a valuable collection of Washingtoniana may be seen, and south to the famous fields of Gettysburg, now the Gettysburg National Military Park. Then Antietam, historic Fort McHenry, in Baltimore, and the Nation's Capital, with its many historic shrines, including Mt. Vernon and Arlington.

At Fredericksburg, Virginia, the trav-

eler is within easy reach of the battlefields of Spotsylvania, Chancellorsville and the Wilderness. Nearby, also, is the George Washington Birthplace National Monument. Then on to historic Richmond, Williamsburg, Jamestown and Yorktown—the heart of the "Battlefield Trail"—all under administration of the National Park Service.

In North Carolina, Kings Mountain National Military Park and the Cowpens Battlefield site are of great interest to the motorist. Chickamauga and Chattanooga Military Park includes the battlefields on Chickamauga Creek, in Georgia, and portions of the Missionary Ridge and Look-out Mountain Battlefields, in southeastern Tennessee.

Not far from Savannah, Georgia, the traveler comes upon old Fort Pulaski, one of the best preserved of the chain of large brick fortresses constructed for coast defense in the first half of the 19th century, and named in honor of the Polish hero of the Revolution, who was mortally wounded in the Battle of Savannah. From Savannah, the motorist may quickly reach Jacksonville—and Florida.

### 30,000,000 VISIT NATIONAL FORESTS

Americans are finding recreation in the National Forests in greater numbers every year. More than 30,000,000 visitors used the 157 National Forests for camping, picnicking, fishing and other forms of recreation during the fiscal year 1937—an increase of twenty-nine per cent over 1936 and a thousand per cent greater than in 1916.

Three out of every four states contain National Forests. The Forest Service now maintains 6,000 free public camp grounds for the use of vacationists, campers, and picnickers, and other facilities are furnished by more than a thousand hotels, resorts, clubhouses and similar structures within National Forest boundaries.

Hundreds of resorts, dude ranches and similar recreation centers adjacent to the Forests also entertain many of their guests by horseback or hiking trips on mountain trails in the National Forests.

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### WINTER SPORTS

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approximately 13,000 summer home permits have been issued on National Forests in areas where the surrounding population is not too dense and where the homes will not interfere with other recreational use by the public.

The 1937 estimate of persons who made use of the National Forests for recreation includes 857,000 persons with summer home permits and their guests, 2,165,000 hotel, dude ranch, and resort guests, 2,366,000 campers and nearly 6,000,000 picnickers. Nearly 19,000,000 additional persons motored, rode horseback, or hiked through the National Forests to enjoy the scenery or the cool forest climate, or entered for other reasons. Millions of motorists who merely used the National Forest roads en route to other destinations are not included in the estimates.

More than 15,000,000 persons—a total larger than the combined populations of Norway, Denmark and Sweden—visited the areas, administered by the National Park Service, exclusive of the National Capital Parks in Washington, D. C., during the travel year ended September 30, 1937.

This represents a twenty-six per cent increase over the record-breaking attendance during the 1936 travel season.

#### ARCHERY IN INDIANA

Hunting with the bow and arrow is increasingly popular among Hoosier archers, more than fifty of whom have tried their luck at Pokagon State Park or the Brown County State Park and Game Preserve since the hunting season opened.

According to reports required of the archery hunters at the two properties, seven rabbits have constituted the total amount of game bagged. Four of these were taken with the bow and arrow at Brown County and three at Pokagon. Weather conditions have not been especially suited to archery hunting, the bow and arrow experts preferring a light snow to aid them in tracking down rabbits.

To date none of the archers have reported taking any quail with a bow and arrow, although this feat was performed in 1935 at Brown County and repeated last year at the same place. The archers hunt under the same regulations as the sportsmen using guns, except that they are not allowed to carry firearms or use dogs when hunting.

#### WINTER SPORTS IN BEAR MOUNTAIN PARK

The sixteenth winter sports season in the Bear Mountain and Harriman Sections of the Palisades Interstate Park, in New York and New Jersey, needs only sufficient snow to round out a varied program.

Six toboggan slides, and a practice ski jump, at Bear Mountain, will be ready for users as soon as snow comes. The new ski tow, opened last winter on the hill west of Lake Menomini, five miles southwest of Bear Mountain, on the Seven Lakes Drive, lifting skiers to the top of two slides, for novices and experienced skiers, will be put into service on the first day the snow is heavy enough.

In January and February, when good snow conditions are generally to be found,

the season's most spectacular events occur, in three ski jumping tournaments on the ski hill at Bear Mountain. These jumps will be held on January 9, January 30 and February 12, Lincoln's Birthday. The Interstate Speed Skating Championships will be held on January 23, probably on Hessian Lake at Bear Mountain.

In addition to the massed winter recreation facilities at Bear Mountain, there is an increasing use of opportunities for snow and ice sports in the interior, about the lakes devoted to group camps in the Harriman Section, seven to fifteen miles southwest of Bear Mountain, and near the western border of the Park, at the lines of the Erie Railroad and Ramapo River.

#### NEW DEATH VALLEY ROAD

For the first time Death Valley, in California, has an all-high-gear road from the west, resulting from the completion of the Darwin Cut-off, a section of the Mount Whitney-Death Valley Highway.

The Darwin Cut-off extends from a point west of the town of Darwin into Panamint Sink, in Death Valley. Adjoining Panamint Sink is Badwater, lowest point in North America, 280 feet below sea level. Mount Whitney, at the other end of the Mount Whitney-Death Valley Highway, is the highest point in continental United States, rising 14,494 feet above sea level. The road does not go to Whitney's peak, however, reaching its greatest elevation near 8,500 feet.

Motorists already are prophesying that the Darwin Cut-off will be the most frequented entrance into Death Valley. Its general grade is six to seven per cent in which are seventy-two easy curves as contrasted with the old route which contained more than 240 sharp turns and had a grade ranging from twelve to twenty-two per cent. Cloud bursts annually made the old road impassable. The Cut-off lies above the paths of cloudbursts and shortens the distance by more than two miles.

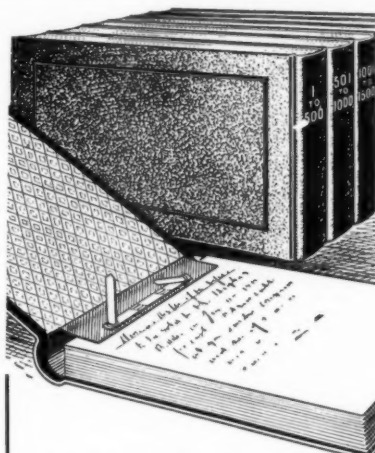
#### BIG GAME SHOWS INCREASE

Bear, deer, elk, moose, mountain sheep, and goats in the National Forests now number approximately 1,523,000. This is an increase of some 250,000, and a gain of ten per cent over the number recorded January 1, 1935.

Antelope, grizzly bears, deer, and mountain goats added appreciably to their numbers, while elk, moose, and mountain sheep declined slightly. Of the latter, however, there are some six per cent more than in 1933. Despite the rigorous conditions under which they live, and the annual toll taken by predatory animals, mountain goats made a comeback from their heavy drop in 1933-34, and now total 18,500. Antelope are placed at 16,500 and mountain sheep at 12,900.

Black and brown bears dropped about one and one-half per cent, but maintain their numbers at 55,000. These animals are present in the National Forests of twenty-five states. Grizzlies, which number only 770, are largely in the Forests of Montana and Wyoming.

Next to deer, which number 1,291,300, elk, with a total of 117,900, are the most widespread big game animals in the National Forests.



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## ASK THE FORESTER

Forestry Questions Submitted to The  
American Forestry Association, 919 -  
17th St., N. W., Washington, D. C.,  
Will Be Answered in This Column.  
... A Self-Addressed Stamped En-  
velope Should Accompany Your Letter.

QUESTION: When was the first bill  
passed in the United States exempting  
forest land from taxation?—R. M. C.,  
Chicago, Illinois.

ANSWER: In 1861 the Nebraska terri-  
torial legislature passed the first act of  
this character. It provided an exemption  
of \$50 in valuation for every acre on  
which there were not less than 400 forest  
trees in planted groves. Fuller informa-  
tion about this act may be found in "For-  
est Taxation in the United States," Mis-  
cellaneous Publication No. 218, obtainable  
from the Superintendent of Documents,  
Washington, D. C., price 75c.

QUESTION: Of what species is the Na-  
tional Community Christmas tree in  
Washington, D. C.?—E. R. S., Wash-  
ington, D. C.

ANSWER: This tree, and its companion  
on the east side of the Jackson statue  
in Lafayette Square, is a Norway spruce  
(*Picea excelsa*).

QUESTION: What is the source of cas-  
cara?—J. M., North Carolina.

ANSWER: Cascara is extracted from the  
bark of the Cascara tree—*Rhamnus pur-  
shiana*, which belongs to the buckthorn  
family. The tree resembles white alder,  
is six to twelve inches in diameter, and  
seldom exceeds sixty feet in height. It  
grows in company with fir, hemlock, and  
spruce from the Puget Sound region of  
Washington southward into central Cali-  
fornia, and eastward to the Bitter Root  
Mountains of Idaho and Flathead Lake  
in Montana. It is also reported to grow  
in Arizona.

Washington, Oregon, and northern Cali-  
fornia have produced approximately 2,000  
tons annually, but reports for the past  
year indicate only 783 tons were shipped  
out of Washington and Oregon. The  
normal yield is about twenty-five pounds  
of bark to the tree.

QUESTION: Is it true that hickory is  
native only to North America?—J. P.,  
New York.

ANSWER: With the exception of a single  
species, *Hicoria cathayensis*, of restricted  
range in east central China, all existing  
hickories are confined to North America,  
and largely to the eastern United States.  
According to "Tree Ancestors," by E. W.  
Berry, the range of hickory extended dur-  
ing the epochs preceding the Ice Age  
across this continent to include the Pacific  
coast as far north as Alaska, all of Europe  
with a considerable portion of northern  
Africa, and Western Asia. Hickory was  
evidently extinct in Europe long before  
its occupation by modern man.

QUESTION: Please describe "The Dea-  
con's Seat," referred to in descriptions of  
old-time logging camps.—F. H., Wash-  
ington, D. C.

ANSWER: The Deacon's Seat was a  
log seat close by the fireplace in the bunk  
house. More recently it has referred to  
a partly enclosed settle, the sheltering  
wings of which protected the occupant  
from cold drafts. It has always been a  
place of honor and is understood to re-  
quire a good man for its occupancy.

QUESTION: What are the best books or  
pamphlets on the trees and shrubs of  
Mexico?—L. M. P., Missouri.

ANSWER: The following were suggested  
by the Librarian of the U. S. Forest Ser-  
vice: "Through Southern Mexico"—being  
an account of the travels of a naturalist,  
by H. F. Gadow, published by Scribners,  
in 1908, 527 pages; "Mexican Plants for  
American Gardens," by C. H. Matschat,  
Boston, Houghton Mifflin, 1935, 268 pages;  
"Studies of Mexican and Central American  
Plants," by J. N. Rose. Government  
Printing Office, Washington, D. C., 1897-  
1911. (Contributions from the U. S. Na-  
tional Herbarium); "Trees and Shrubs of  
Mexico," by P. C. Standley. Government  
Printing Office, Washington, D. C., 1920-  
23. (Contributions from the U. S. Na-  
tional Herbarium, vol. 23).

QUESTION: Have you suggestions on  
the correct method of cooking wild game?  
—S. C., New Jersey.

ANSWER: This question was referred  
to Evangeline Jennings, Extension Nutri-  
tionist with the State College of Agricul-  
ture at Laramie, Wyoming, who replied  
that "the same cooking principles are used  
for cooking wild game as used for our  
more common domestic meats. Tender  
young animals may be fried or broiled  
and older ones made tender by long slow  
cooking with moisture in stews, fricassees  
or casserole dishes. If wild game contains  
a small amount of fat, roasts may be  
larded or meat may be roasted covered  
with slices of bacon. The wild flavor in  
meat is overcome by adding a small  
amount of vinegar, or by using dressing  
containing onion, sage, celery or by using  
a very small amount of garlic. Making a  
regular swiss steak out of wild game is a  
most palatable method of preparation.

"All wild game has a better flavor and  
is more tender if hung for a few days be-  
fore being cooked."



## NEW BOOKS

**RANGE PLANT HANDBOOK**, prepared by the U. S. Forest Service. Published by the Government Printing Office and obtainable from the Superintendent of Documents, Washington, D. C. Price \$2.50.

Contrary to popular opinion, western mountain and forest range plants include more than grasses. In this encyclopedic collection of the plants suitable for supporting livestock, one finds many of the flowers which adorn the high mountain areas, the major species of brush, and a number of small trees.

The Range Plant Handbook, as prepared by W. A. Dayton and his colleagues in the Forest Service, is a helpful collection of descriptions of the more important ground cover and shrub growth of the entire western area. While the book describes some 300 of the more important species, it is significant that these are chosen from a possible list of some 10,000.

The 294 illustrations serve to identify the material, and the clearly written, non-technical descriptions can be understood by any person.

Designed primarily for forest officers, this is a book which will be useful to any person going into the western forests who desires help in identifying the varied plant growth.—G. H. C.

**ADVENTURES OF A BIRD WATCHER**, by Bert Dayton. Published by the Palisade Press, 280 Broadway, New York, N. Y. 104 pages. Price \$1.50.

The author—a naturalist who has spent more than a quarter of a century in the field, has presented in this small, attractively bound book some of his personal observations of birds found in the glades and wooded sections of southern New York. The accounts of his experiences and the scenes described are interesting and inspire one to see similar country populated by a variety of feathered wildlife.—D. D.

**GREAT HISTORIC ANIMALS—MAINLY ABOUT "WOLVES,"** by Ernest Thompson Seton. Published by Charles Scribner's Sons, 597 Fifth Avenue, New York. 320 pages. Illustrated. Price \$2.50.

America's most distinguished author of animal stories presents a collection of short stories dealing with famous wolves that became historic through their appalling savagery and fiendish cunning. There are also stories which have been chronicled from tales told by hunters, personal experiences, and traditional legend. Among the historic narrations will be found the tale of "Courtaud, the King Wolf of France"—the wolf that every day devoured a man as a dog might maul his daily ration bone, and "Padraic and the Last of the Irish Wolves"—marauders of sheep ranges and beef herds in northern Ireland in the middle 1600's.

Included also are several stories of lesser animals related from personal events,

celebrated legend, and fiction. Throughout the whole Mr. Seton communicates to the reader his own sympathetic understanding of wild animals.

The book is illustrated with Mr. Seton's own sketches and full page drawings.—D. D.

**CENTRALIZED MANAGEMENT AND UTILIZATION ADAPTED TO FARM WOODLANDS IN THE NORTHEAST**, by C. Edward Behre and C. R. Lockard. Published by the Charles Lathrop Pack Forestry Foundation, Washington, D. C.

This publication can be well recommended for reading by every forester and woodland owner. Under a thesis titled "forest industries decline while area available for forestry increases," there is well brought out the value of cooperative effort and centralized control,—technical, commercial, financial and socially economic. In the United States farm woodlands comprise one-third of the commercial forest acreage. The Cooperstown Forest Unit, which has been launched in some degree under an organization known as the Otsego (County) Forest Products Cooperative Association, Incorporated, is described as an illustration of the possibilities of community forestry in North America.—R. E. W.

**NATIONAL PARK SUPPLEMENT TO PLANNING AND CIVIC COMMENT**. Published by the American Planning and Civic Association, Washington, D. C.

A thirty-six page review of National Park ideals and accomplishments in which the way is pointed toward a land use program built around the National Park System. Recommendations are contained for additions to the National Park System. These include the proposed Mount Olympus and King Canyons National Parks, and additions to the Grand Teton National Park.

**MARINE GAME FISHES OF THE PACIFIC COAST**, by Lionel A. Walford. Published by the University of California Press, Berkeley, California. 205 pages, with an additional 69 pages of photographs in natural color and paintings. Price \$5.00.

Most of the material for this handsome volume was gathered during a two months' cruise in Mexican waters in the spring of 1935. Its purpose, as was that of the expedition, is to make the Pacific fishes better known to anglers—and also to the science of ichthyology, for five new species were discovered and are herewith described for the first time.

In delightful fashion it has succeeded, both in text and in illustration. Paintings, collotypes and natural color photography have been used with striking effect. To the Pacific marine fishermen it should prove as necessary as maps and charts to the navigator.—E. K.

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## FORESTRY IN CONGRESS

By G. H. COLLINGWOOD

As this issue goes to press, one week remains of the special session of Congress. The Reorganization bill (S. 2970), contrary to expectations, has not made its appearance. A parliamentary tangle combined with unexpected widespread opposition to those features of the bill that would affect forestry, wildlife, and soil conservation, and the threat to the civil service contributed to block efforts of Senator Byrnes to bring the bill up for action during the early days of the session as originally planned. The present outlook is that reorganization will not figure in the special session, but that renewed efforts will be made to bring it up during the regular session which will convene on January 3.

From the beginning of this session, proponents of the anti-lynching bill have controlled Senate activities. Senatorial courtesy permitted Senator Byrnes, on November 16, to speak for two hours on the reorganization bill, but when that period expired Vice-President Garner recalled a resolution of last August and recognized Senator Wagner, who moved the consideration of the anti-lynching bill. Only with the consent of Senator Wagner was the ensuing filibuster interrupted to permit introduction of the farm bill. Again, when Senate action on that bill was completed, proponents of the anti-lynching bill resumed control and were free to bring it up or withhold it in favor of wages and hours, housing, or any other legislation. The reorganization bill was clearly not on their program.

During recent Rivers and Harbors Committee hearings, the Mansfield bill, H. R. 7365, proposing to divide the country into seven regional planning and power divisions, and to create boards whose recommendations would be carried out after congressional approval by existing government agencies, without disturbing the Mississippi River Commission, was described by Secretary Wallace as an advisory measure in regard to planning for navigation, reclamation, conservation, and reforestation, and "an action bill in respect to hydro-electric power." Warning against the impossibility of serving two masters, the Secretary of Agriculture expressed the belief that responsibility for executing the recommendations of the several planning boards should be left with the existing departments and agencies of government. At the same time, he proposed amendments to protect such agencies as the Forest Service and Soil Conservation Service from being shorn of existing authority in the field of land use planning and conservation.

At an earlier hearing, Stuart Chase urged approval of the bill. Calling at-

tention to the fact that 10,000,000 persons have gone on relief after having lost their resource base in land, water, and minerals, he said: "We have only three courses to pursue in regard to them: A resettlement program; a permanent dote to provide for them; or adoption of a program to reconstruct their surroundings by planning. \* \* \* Obviously," he concluded, "the third alternative is the solution."

The Mansfield bill limits the activities of the proposed authorities to surveys and plans, while S. 2555, introduced by Senator Norris, not only provides for planning but for the execution of the plans. The principles of this bill have received the endorsement of the Administration, with the result that the Norris bill may be amended to conform with the Mansfield bill.

Recent press releases indicate that the President intends to reduce next year's budget by \$800,000,000. Of this total \$500,000,000 would be taken from relief appropriations so as to bring that to \$1,000,000,000. A reduction in enrollment of the CCC will be recommended with the result that it may receive \$275,000,000, which is \$75,000,000 below the current appropriation, and as previously recommended appropriations for federal highway aid may be reduced by some \$112,000,000. Other cuts tentatively agreed upon are expected to total \$125,000,000 to \$150,000,000, and would be absorbed by the several departments, without affecting either the War or Navy Departments. The Bureau of the Budget has given no indication as to how the proposed slashes will affect such conservation activities as those dealing with forestry, wildlife, soil conservation, or National Parks, but there are rumors that forest acquisition will receive little or nothing.

According to S. 3017, introduced early in the special session by Senator McNary, the Secretary of Agriculture would be authorized to enter into cooperative agreements with the owners of adjoining timberlands to establish sustained yield units wholly or partly within the Deschutes and Fremont National Forests in Oregon. Except for locality limitations, the features of the bill are similar to those included in the sustained yield sections of H. R. 255, introduced last January by Representative Doxey of Mississippi. In consideration of the privilege of purchasing adequate National Forest timber without competitive bidding, the cooperating owner would agree to comply with all federal requirements respecting their management. No hearings have been scheduled by the Committee on Agriculture and Forestry as yet.

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H. R. 7365—MANSFIELD (S. 2555—NORRIS)—To provide for the regional conservation and development of the natural resources. June 3, 1937. Committee on Rivers and Harbors held hearings late in November and early December.

NATIONAL FORESTS

S. 3015—MCNARY (H. R. 8640 and H. R. 7695—MOTT)—To add certain lands to the Siuslaw National Forest in the State of Oregon. Introduced November 16, 1937. Referred to the Committee on Agriculture and Forestry.

S. 3016—MCNARY—To provide for the acquisition of certain lands for and the addition thereof to the Deschutes National Forest in the State of Oregon. Introduced November 16, 1937. Referred to the Committee on Agriculture and Forestry.

S. 3017—MCNARY—To promote sustained yield forest management within the Deschutes and Fremont National Forests in order thereby (a) to stabilize communities, forest industries, employment, and taxable forest wealth; (b) to assure a continuous and ample supply of forest products; and (c) to secure the benefits of forests in regulation of water supply and stream flow, prevention of soil erosion, amelioration of climate, and preservation of wildlife. Introduced November 16, 1937. Referred to the Committee on Agriculture and Forestry.

NATIONAL PARKS

S. 3025—ADAMS—To extend the authority of the Secretary of the Interior to grant privileges, leases, and permits to all lands and buildings under the jurisdiction of the National Park Service. Introduced November 18, 1937. Referred to the Committee on Public Lands and Surveys.

TREE DISEASES—INSECTS

S. J. Res. 232—MURRAY—To amend the joint resolution entitled "Joint Resolution making funds available for the control of incipient or emergency outbreaks of insect pests or plant diseases, etc.," approved April 6, 1937, by increasing the available funds from \$2,000,000 to \$5,000,000. Introduced December 3, 1937. Referred to the Committee on Agriculture and Forestry.

WILDLIFE

S. 3086—ADAMS—To authorize the Secretary of the Interior to dispose of surplus buffalo and elk of the Wind Cave National Park herd, and for other purposes. Introduced December 3, 1937. Referred to the Committee on Public Lands and Surveys.

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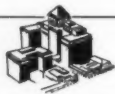
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## COMMON SENSE IN FOREST CONSERVATION

(Continued from page 28)

to do with the relation of the National Forests to the whole undertaking. Obviously, the administration of the Government's forests, while of great importance, is only one part of a much larger whole. Years ago, the Government's policy was extended to the promotion of forestry on all timber-growing lands of the United States. Many of its most telling developments have been in that direction,—the cooperative protection setup, the regional experiment stations, the Forest Products Laboratory, the encouragement of State Forests, farm forestry, and so on. These, together with the National Forests, are all parts of one whole.

Nevertheless, the National Forests remain the core of the Government's work. They put directly upon the Service responsibility for the administration of property, in protection and utilization. They afford a great proving ground of first-hand experience. They provide a great training school for personnel. They give the Forest Service its responsible place in the economics of forestry, its stability in all relations under the entire program. To take the National Forests away from the Service and tell it to carry on its other activities, would be like expecting the arms and legs of the human body to function, with the vital organs gone.

Furthermore, the National Forests are not stationary. Since the Weeks Act of 1911, they have been enlarged by the purchase of some eleven million acres. Where and how far national ownership should be further enlarged, to include lands not capable of commercial forestry or desired for State Forests, is a very fundamental question. It is inconceivable that this policy can be intelligently directed by any agency except the one which has the whole picture before it and is responsible for the Government's plans and activities in every part of the forest panorama.

We do not know just what the Administration proposes for the Forest Service.

The apparent intention is to transfer the National Forests to the Interior Department, rechristened as the Department of Conservation, leaving all the cooperative, research and educational activities in Agriculture. Such a dismemberment of intertwined functions would be a great mistake. The Forest Service has one big job, that can not be broken up without serious



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THE KIDNAPPING—OR MORE AND MORE DEMOCRACY

loss to the efficiency of its fragments. Wherever it may be placed in the Governmental structure, it should be kept intact, lock, stock and barrel.

The lumbermen of the Pacific Northwest, as far at least as represented by the West Coast Lumbermen's Association, believe that place should remain in the Department of Agriculture. Congress so decided in 1905, upon the recommendation of Theodore Roosevelt. The vitality and power of the forestry movement in the United States date from that decision. No small part of this is due to the fact that forestry was merged with the other activities of Government dealing with the productive use of land.

More and more sharply, in the past thirty-two years, with all the developments in timber protection, timber culture, tim-

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ber planting and studies of land qualities, does forestry stand out as a great, continuing use of land. Forest industries are swinging over to timber cropping. Farm woods take up a third of all forest land. Millions of acres of sub-marginal fields are reverting to forest. More than a fourth of our land area today is useful only for growing timber; and the proportion is increasing. Forestry is one of our largest, permanent forms of land use. Is it not a logical and efficient setup of national business to keep forestry in the Department which has to do with the productive use of land and crops?

It may also be observed that farm forestry and naval stores forestry in the

Southeast are obtaining benefits under the Department of Agriculture's Soil Conservation program. Timber has just as logical a place in crop control or soil conservation as wheat or cotton.

In simple terms, the West Coast lumber industry wants to see common sense in the organization of Federal conservation. We do not want our effective cooperation in the Northwest broken down by changes in the Government's policy or executive direction. We do not want the Forest Service vitiated by loss of its most important function. We believe that the progress and promise of forestry in the United States can best be realized by keeping it in the Department of Agriculture.

## SKIS TAKE THE FORESTS

(Continued from page 22)

Amateur ski runs, a slalom, cross-country course, and a coasting hill are included in the attractions.

The views from Deer Park, summer or winter, are among the most inspiring of the whole Pacific Northwest. The straits coming into Puget Sound and the Sound itself lie to the north, spread out like a map, and clear days reveal in amazing distinctness the spectacular north Cascade Range extending south from Canada, with its dramatic peaks which include Mount Baker, Mount Shuksan, and many others. Nearby the panorama of the Olympics in their glistening winter garb is calculated to quicken the heart of the most blasé.

California's top winter sport area is in the Tahoe National Forest, in the eastern part of the state. Here, in a moun-

tain region where in 1847 the Donner Expedition made history, upwards of 100,000 people each winter are enjoying the thrills of skiing, tobogganing and other winter sports. The Donner Trail Recreational Area, as it is called, is readily accessible by railroad and by transcontinental highway U. S. No. 40. It provides winter sports in the form of skiing on Class A, B and C jumps, slalom and cross-country racing and tobogganing. Accommodations are available at Truckee, Nevada City and other nearby towns.

This brief survey touches only the more outstanding winter sports areas on the National Forests. There are areas and developments in many other forests that might be mentioned. More detailed information as to specific areas will be furnished upon request.

## REPTILES OF THE BIBLE

(Continued from page 13)

teresting to note that the asp is the serpent usually considered the direct agent of Cleopatra's death.

The adder also has five references and is mentioned in close connection with the asp, both seeming to be viewed with particular disfavor. While it is difficult to name the exact species, the puff-adder is probably meant (*Bitis arietans*), since this snake ranges into Arabia. The viper has nine references and as the common sand viper (*Cerastes vipera*) is abundant today throughout northern Africa and Egypt. One of the most interesting of mentions in connection with the viper is that experience of Paul on Melita. It will be recalled that, after the ship which was taking him to Rome was wrecked, the passengers and crew were cast ashore on the island of Melita. Making a fire after landing, it is stated in Acts 28: 3 that "when Paul had gathered a bundle of sticks and laid them on the fire, then came a viper out of the heat and fastened on his hand." The barbarous peo-

ple of the Island who witnessed the sight considered that Paul was a murderer "whom though he hath escaped the sea, yet vengeance suffereth not to live." However, when he shook the snake off into the flames and suffered no ill effect "they changed their minds and said that he was a god."

Though, as has been outlined above, the references to reptiles in the Bible are not to be considered numerically with those to birds and animals, they are not without considerable interest. Reptilian life is not a popular subject, it never has been and probably never will be, and it is very unfortunate that such is the case. Some reptiles fill a very distinct need and humanity would be in sore straits without their aid to agriculture in keeping down destructive rodents and insects. Only a study of the facts will reveal their true value but few are willing to make the slightest effort to ascertain the truth about these unrecognized benefactors.

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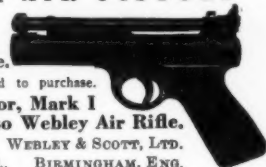


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**Index to  
ADVERTISERS  
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American Fork and Hoe Company .....	39
American Telephone and Telegraph Company, The .....	2nd Cover
Barlum Hotel .....	44
Bartlett Manufacturing Company .....	43
Beebe Brothers, Inc. ....	44
Capitol Park Hotel .....	41
Caterpillar Tractor Company, The .....	3
Chalfonte-Haddon Hall .....	46
Cleveland Tractor Company, The .....	4th Cover
Fechheimer Brothers Company, The .....	47
Gardens of the Blue Ridge .....	42
Herbst Brothers .....	37
Idaho School of Forestry .....	46
Keene Forestry Associates .....	42
Kelsey Nursery Service .....	42
Knapp Company, Fred .....	42
Lawrence Company, George .....	47
Loring, J. Alden .....	47
Maine School of Forestry .....	43
Mayflower Hotel .....	37
Plumb, Inc., Fayette R. ....	33
Randolph, L. F. ....	47
Shipman's Sons, Asa L. ....	41
Smith & Company, D. B. ....	35
Stoeger, Inc., A. F. ....	47
Tobacco By-Products & Chemical Corporation .....	43
Warren Axe and Tool Company .....	35
Warshal & Sons, J. ....	47
Webley & Scott, Ltd. ....	47
Western Maine Forest Nursery .....	42

## What's Happened to the Shelterbelt?

(Continued from page 10)

and resulting soil movement on every farm. These strips, however, will not be of rigidly fixed width or orientation, as so many people have come to believe. Because of a great diversity of soil characteristics, topography and other factors found on the ground, there can be no fixed rule for shelterbelt planting. As an example, on dry, upland soils the only way in which trees may conquer the prairie and persist over a long period is by a mass effect which promotes the accumulation of litter and underbrush, the ready percolation of water into the soil, and all the features which distinguish the "forest" from the prairie or even from open woods.

The theory is not that a broad belt necessarily offers better protection to the adjacent land than does a properly composed narrow one, but that on any site such as an irrigated valley where soil moisture is not a critical factor to be reckoned with, a much narrower belt, even two or three rows of trees and shrubs will suffice. Ordinarily the belts will have one general characteristic, however, and that is that they will be flanked at least on the windward side with shrubs or low-branching trees. The reason for this is that the larger trees tend to prune themselves up as they grow older, leaving only the trunks to break the force of the wind. It is necessary to close up this so-called "understory" in order to form a barrier from the ground line up.

It is anticipated that as time goes on, an essential part of the economy of each farm and its management will be the maintenance of protective strips around all fields subject to blowing. The foresters working in the territory picture an environment where human beings and livestock will obtain shelter from bitter winter winds and where the snow will accumulate over the fields rather than in drifts, highway ditches and other depressions. If the plan is brought to its ultimate design, a new environment will have been created—an environment including a great deal of natural beauty and all the background of an area reasonably protected by forest cover.

WILLIAM B. GREELEY (*Common-sense in Forest Conservation*), a native New Yorker, is now associated with the West Coast Lumbermen's Association. Formerly Chief Forester of the United States, he is one of the most distinguished members of the profession.

RAYMOND WOHLRABE (*Photographing Trees in Winter*) is a native of Wisconsin. An instructor in biological science by profession, his hobbies are travel and photography—and he has ridden them both to the far places of the earth.

THE COVER insert is a photograph by the National Park Service and shows a thrilling moment on a high slope, as an expert skier does a "Christiana."

## WHO'S WHO

Among the Authors in This Issue

EARL TINKER (*What's Happened to the Shelterbelt?*) writes from the Washington headquarters of the Forest Service and answers here many questions about this great (and greatly disputed experiment) of the Government in tree planting strategy designed to best the dust storm.

ALEXANDER SPRUNT (*Reptiles of the Bible*), a South Carolinian, is a natural history enthusiast and writer. Former Curator of Ornithology at the Charleston Museum, his chief interest is in birds and in recent years he has acted as Supervisor of Southern Sanctuaries for the National Association of Audubon Societies, operating out of Charleston down the coast through Florida, the Gulf Coast and Texas to the Mexican border.



Alexander Sprunt



M. S. Kahler

M. S. KAHLER (*A Paper Company Programs Its Tree Futures*) is a forest engineer. A New Yorker by birth, he has, since his graduation from the University of Michigan in 1925, been almost continuously in the South, working in the van of the rapidly expanding pulp and paper industry there. He tells an interesting story of how his company—a wide-awake outfit alive to the tree necessities of the future, has prepared to meet them.

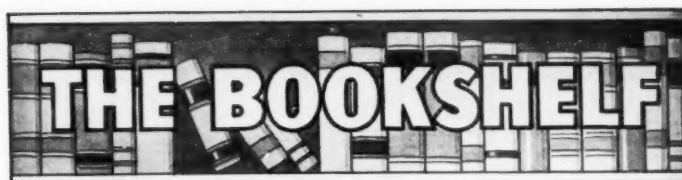
OID BUTLER (*Skis Take the Forest*) is Executive Secretary of The American Forestry Association and Editor of AMERICAN FORESTS magazine.

CARLETON MITCHELL (*Watch the Bait!*) writes of the thrilling sport of deep sea fishing off Bimini. Born in New Orleans, he left Miami University for a cruise to the West Indies, and he has been cruising more or less ever since. Wireless operator, airplane pilot and navigator in a small way, photography is his hobby—and it is now his business.



Carleton Mitchell

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Field Book of Illinois Wild Flowers.....	1.50
Spring Flowers of Minnesota—Rosendahl.....	1.00
Cyclopedia of Horticulture—Bailey.....	15.00

### MISCELLANEOUS

Our Natural Resources—Parkins et al.....	\$ 5.00
How Plants Get Their Names—Bailey.....	2.25
Conservation—Havemeyer and Van Hise.....	5.50
Soil Erosion and Its Control—Ayres.....	3.50
Tree Crops—Smith.....	1.49
Ranger Trails—Riis.....	2.00
A Continent Lost—A Civilization Won—Kinney.....	4.00

This list of Selected Books is a service of The American Forestry Association to its members. Prices quoted are not guaranteed, but to the best of our knowledge are correct. A more complete list of recommended books is available on request. Members ordering books through the Association are entitled to a 10% discount from published prices.



# WHEN WINTER COMES -



## CARRY ON

For the millions of persons who visit our many national parks each year, Cletracs perform an often unseen but invaluable service in making these parks more beautiful and more accessible.

Summer seasons call for such work as road construction and road maintenance, the building of horseback trails and the oiling of footpaths. And when winter comes, Cletracs still carry on, chiefly in snow removal from footpaths and highways. Winter and summer, the work of Cletracs permits travelers to make their trips through these parks and enables the National Park Service to carry on its ceaseless task of park development.

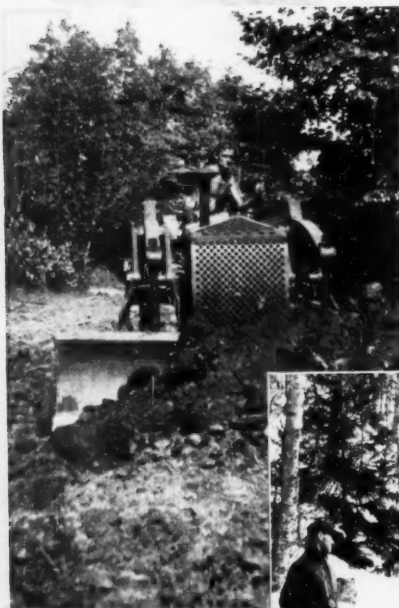
THE CLEVELAND TRACTOR CO.  
Cleveland, Ohio

Winter's snows see Cletracs clearing footpaths and roadways.



Summer days see Cletracs in National Parks moving earth and building roads. This Cletrac is at work at Mammoth Cave Park.

Scraping and grading roads and trails is a constant summer performance in many National parks.



In winter, clearing of logs, stumps and rocks from forest areas is easily done with Cletracs.



## CLETRAC CRAWLER TRACTORS

The only tractors with controlled differential steering that keeps both tracks pulling at all times—on the turn as well as on the straight away.



